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ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

A MONTHLY REVIEW OF

Gynæcology, Obstetrics, Abdominal Surgery,
and the Diseases of Children.

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ANNALS

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No. 1

ORIGINAL COMMUNICATIONS.

The After-treatment of Cœliotomy Cases with Special Reference to Shock and Septic Peritonitis.

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GRAND RAPIDS, MICH.

Gynæcologist to St. Marks' Hospital, Fellow of the American Association of Obstetricians and Gynæcologists.

I SHALL offer no apology for bringing before this body a subject so frequently discussed, as its importance is always its excuse.

There are three post-operative conditions, which, by reason of their serious nature, call for prompt and intelligent action on the part of the attending surgeon. These are (1) secondary hæmorrhage; (2) shock; and (3) septic peritonitis.

The question of secondary hæmorrhage I shall dismiss briefly, not because it is of less importance, but because its treatment should be mainly preventive, and consists of careful, certain securing of all possi-

ble sources of hæmorrhage at the time of operation. But, as an additional preventive measure, and one whose importance is sometimes underestimated, continuous, watchful care must be exercised to prevent sudden movements on the part of the patient, or turning or tossing during the first few hours following the operation.

The reasonableness of this measure is apparent to all of you, and needs only to be mentioned. If hæmorrhage does occur, the only remedy is to re-open the wound and re-tie the bleeding artery, if the condition of the patient will admit. If not, secure it by clamps, close the wound as securely as circumstances will admit, and wait for reaction. In many cases, however, it will be advisable, before

¹ Read before the section of Gynæcology and Abdominal Surgery of the First Pan-American Medical Congress, Washington, Sept., 1892.

re-opening the wound, to transfuse into a vein one or two pints of normal salt solution. By this measure almost no time will be lost, and the best possible chance given to the patient.

Apart from secondary hæmorrhage, the most frequent and formidable of the early post-operative complications is shock. Its importance your own experience will attest, as instances of its fatality too easily recall themselves to your memories. It will not be possible to discuss its treatment intelligently without reviewing very briefly its ætiology and pathology.

Authorities almost without exception have pronounced it paresis of some part of the nervous system; but the unsatisfactoriness of such pathology is evidenced by the variety of opinions expressed. Some pronouncing it a general paresis of the vaso-motor system, others a paresis of the entire sympathetic system, and others limit it to a paresis of the abdominal vaso-motors. Opinions are thus diverse because no one of these theories will satisfactorily explain all the constant symptoms. But that it cannot be cardiac and arterial *spasm*, but must rather be some form of vaso-motor *paresis*, is thought to be proven by the fact that arterial tension is invariably *low*. This one fact seems to possess more importance than the combined weight of all the other symptoms.

On account of the limited time at my disposal on this occasion, I will refer you for a full discussion of the pathology of shock, as related to individual symptoms, to a paper read by me before the American Association of Obstetricians and Gynæcologists at its meeting in June last.

But I must be allowed to quote from the "Manual of Human Physiology," of Landois and Stirling, to show that low arterial tension is not incompatible with strong stimulation of the cardiac nerves.

On page 106, in speaking of cardiac stimulation, and of the action of electricity, they say: "A constant electrical stimulant of moderate strength increases the number of heart beats." Also, "If the constant current be very strong, the cardiac muscle assumes a condition resembling, but not identical with, tetanus (Ludwig and Hoffa), and, of course, this results in a fall of blood pressure (Sigm. Mayer)."

Now this is precisely (as I believe) the *primary* condition in shock; namely, a strong, constant irritation (or stimulation) of the entire sympathetic system. And to show as briefly as possible that such a view is not only not incompatible with the symptoms, but is rather a necessary conclusion from a consideration of them in their entirety, I will quote the conclusions expressed in my paper above referred to.

Shock is not a *general* paresis of the sympathetic nervous system, because

(1) The entire arterial system is *contracted* rather than *dilated*; and

(2) The skin is moist or bathed in perspiration by reason of the irritation of the secretory fibres of the sweat glands, instead of dry, as it would be in pallor of the skin, low temperature, and *paresis* of sympathetic fibres.

It is not a paresis of the cardiac nerves and ganglia, because

(1) The heart's action would be slow by reason of the preponderance

of the inhibitory influence of the pneumogastrics;

(2) It is not probable that *cardiac* branches of the cervical sympathetic would be *paretic*, while other branches were abnormally *stimulated*, and in shock the *pupils* are *widely dilated*, by reason of the stimulation of the pupillary branch of the cervical sympathetic.

It is not a paresis of the vaso-motor nerves of the abdominal vessels because

(1) Paresis of these nerves would cause dilatation of the abdominal arteries.

Dilatation of the renal artery would cause polyuria, even if accompanied by dilatation of the other abdominal vessels. In shock the secretion of urine is *scanty*, or even *suppressed*.

(2) Dilatation of abdominal arterioles would cause decreased peristalsis. In shock, peristalsis is often increased.

On the other hand, it *is* hyper-irritation of the entire sympathetic system, because,

(1) The skin is pale and livid by reason of *contraction* of the arterioles, because of *stimulation* of their vaso-motor nerves.

(2) The heart's action is rapid by reason of *stimulation* of its sympathetic nerve supply.

(3) There is scanty secretion of urine by reason of *contraction* of the renal arteries, the result of *stimulation* of their nerve supply.

(4) The skin, though pale and livid, is bathed in perspiration by reason of *stimulation* of the secretory nerves of the glands.

(5) The pupils are *dilated* by reason of *stimulation* of their sympathetic nerve supply.

(6) The pulse, at the wrist, while rapid and small, as would be expected in vaso-motor stimulation, is *soft* and *very compressible*, by reason of the very scanty relaxation or dilatation of the heart. (The same condition into which it is thrown by strong electrical stimulation of its nerve fibres, as shown experimentally.)

(7) This condition of the heart may not have been actually demonstrated (as existing in shock), but may justly be inferred by analogy, reasoning from the action of the uterus under similar conditions. Each contraction of the uterus is normally followed by a period of perfect relaxation, as is the heart. Over-irritation or stimulation of the uterine ganglia, or sympathetic nerve supply, causes *rapid* contractions with *very imperfect* relaxation. It is fair to infer the same condition in the heart, under similar causation. Thus, the supply of blood thrown into the arteries is scanty, and blood pressure is *low*.

(8) The first five of these conclusions are justified by well-known experimental demonstrations. The sixth and seventh are fair conclusions by reasoning from analogy.

(9) That the condition of the heart is one of stimulation rather than paresis may be considered demonstrated by the fact that in cases of sudden death from severe shock, the heart has been found *contracted* and *empty*.

From these facts I feel justified in concluding that the *primary* condition in shock is in no sense a paresis, but is rather a severe irritation of the entire sympathetic system. I say that such is the pathology of the early periods of shock, but I am willing to admit that after a variable period the

entire condition may change without any perceptible change in the symptoms. All muscular tissue tires after a period of unusual activity. This is true of involuntary muscle, equally with voluntary. And though the nerve impulse continues irritant in nature, the heart muscle is weakened, and cannot contract with normal vigor. The arterial spasm is at the same time violent. The frequency of the heart beat may continue the same, but the size of the blood current will not be increased.

The conditions which exist during and after a *cœliotomy*, which is productive of shock, certainly would seem to be such as would give rise to an impulse of irritation rather than of paresis, for instance—the compression of nerve fibres by the ligature, the severe manipulation of the intestines, the forcible separation of adhesions, whereby the peritoneum always suffers more or less violence—all are extremely irritant in nature.

While in all cases the nerve impulse is irritant, and equally in all cases the primary condition is one of cardiac and arterial spasm (if I may so term it), its duration in point of time is extremely variable. All conditions which tend to weaken the heart before operation tend to shorten the first stage of shock. Such are lack of nutrition, exhausting discharges, and especially long-continued septic infection. In such cases, the condition of cardiac and arterial spasm will soon, by reason of "muscle tire," give place to weak and inefficient contraction; this fact must be kept in mind in all cases, as the treatment of the two conditions is very dissimilar.

Shock usually manifests itself before the patient is removed from the

operating table. It is usually comparatively sudden in its onset, and may prove rapidly fatal. When first noticed, the patient's head should be lowered, and nitrite of amyl freely administered, with, if you please, hypodermics of nitro-glycerine. The patient should be placed in a dry, warm bed, and surrounded by hot water bottles. The surface should be kept as dry as possible to prevent unnecessary chilling by evaporation. Bearing in mind that the condition is one of extreme sympathetic irritation, our remedies should be such as are directly sedative. Chief among these is some preparation of opium. On account of its freedom from nauseating effects, I prefer codeine, of which I administer at least one grain hypodermically as soon as the patient is placed in bed, and repeat it in two, three or four hours, if necessary. I am aware that many of our most experienced operators condemn, without qualification, the administration of any form of opium at any time after a *cœliotomy*, but I can see no logical ground for such condemnation. I know that it is claimed that its use checks secretions, stops peristalsis, and "masks symptoms." Yet, in the first hours of shock, we wish such a remedy—one that will check profuse perspiration, quiet painful and irregular peristalsis, and relieve the vaso-motor irritation that causes cardiac and arterial spasm. There are no symptoms at this early stage that should not be "masked." The abdominal pain which generally is caused by spasmodic and irregular contraction of the muscular coats of the intestines, serves no good purpose; yet some say that pain after a *cœliotomy* is "healthful." Why is it healthful?

What good purpose does it serve? The only excuse that has any degree of plausibility is that constant peristaltic action of the intestines *may* prevent the formation of adhesions, and this is an assumption not easily proven. But I shall speak of the use of codeine again when discussing the production of catharsis.

In addition to codeine I advocate the free use of hypodermic injections of nitro-glycerine, beginning with one-fiftieth grain as often as indicated. Its mode of action, relaxing arterial spasm, is so well understood now that I need only mention it. These two drugs, codeine and nitro-glycerine, with nitrite of amyl if necessary, fulfill the indications, as far as medication is concerned, for the first few hours.

But there is one other remedy which I consider of great importance in cases of severe shock, and that is hot water. It *must* be used freely, either by injection into the colon, or by transfusion into a vein. What are the indications for it? First: To relieve the thirst which is often so distressing after cœliotomy, even when there has been almost no loss of blood; and, second: To replenish the blood vessels. After an abdominal section, when there has been prolonged or severe manipulation within the abdominal cavity, there is invariably a free outpouring of serum. If, in addition to this, there occurs the profuse perspiration of profound shock, the loss of fluid from the system is rapid and excessive, and must be artificially replaced if you would preserve life. For such purpose repeated injections of from a pint to a quart of water through the long tube into the colon, fulfill every indication.

It is absorbed with great rapidity, and manifests its beneficial influence by increasing the volume, and lessening the frequency of the pulse.

But, in shock, it is not enough that water should be used. It should be as hot as can be borne by the patient, because it is not only more rapidly absorbed, but the soothing effect of the moist heat on the irritated abdominal plexuses is marked, and tends greatly to relieve those conditions, the manifestation of which is shock.

But, if these phenomena continue to what I have denominated the second stage, where cardiac and arterial spasm are replaced by cardiac weakness by reason of "muscle tire," hot water may be injected directly into the vein with great advantage. It acts more promptly and powerfully, and with greater certainty, than when injected into the colon. Here, also, our medication must be different. I now rely on the free hypodermic use of strychnia, digitalis and other cardiac stimulants. It is in this stage that the flagging powers must be stimulated, and these medicines used in no hesitating way. They may be given in doses so large as to be alarming under ordinary circumstances, and yet produce none but good results. This course of treatment promises better results, to my mind, than any other, and is logical.

After recovery from shock, the next great danger to be met and overcome is peritonitis. Whether the theory promulgated by Mr. Lawson Tait, that peritonitis is due to a disturbance of the innervation of the peritoneum rather than to sepsis, be correct or not, all will agree that after death from post-operative septicæmia evidences of peritonitis are almost inva-

riably found, and our instinctive feeling is that, if we can prevent infection, we need not fear peritonitis. With that class of cases where the infection is introduced into the abdominal cavity at the time of operation, I shall not attempt to deal, as the expectation is that all who operate take such precautions against septic infection that it may be excluded as a possible factor in any case. But, unfortunately, there is a large class of cases where, from the nature of the fluids removed from the abdomen or pelvis, septic infection is a most imminent danger. In such cases the most important part of the treatment is preventive, and must be attended to at the time of operation. In all such cases, drainage by tube or gauze is proper. I will not say imperative, as the experience of many of you would contradict the term.

But in the post-operative treatment of threatening sepsis (or peritonitis), before it has become firmly established, nothing is better than free catharsis, and, among drugs, none are better than the salts of magnesia for this purpose, provided always that the stomach will tolerate them. They are better than others because they have no irritating action, do not stimulate the glands especially, but act by osmosis, unloading the blood-vessels of serum, and causing them to replenish themselves from the fluid in the peritoneal cavity, thus promoting absorption and drainage. But if, for any reason, salines cannot be used, nothing in my experience is better than calomel.

While we all unite on the desirability of early catharsis in these threatening cases, we may not all agree as to when it should be undertaken, nor

as to the best means of promoting it. There are several factors influencing peristalsis after abdominal operations, that it will be well to keep in mind.

Peristalsis is normally produced by the stimulus received by Auerbach's plexus (situated in the muscular coat of the intestines) directly from the contents of the canal, or through the sympathetic nerves from which this plexus is formed. It is also modified by the vascular conditions, that is, contractions of arterioles, by which venous blood becomes in excess, stimulates peristalsis; dilatation of arterioles, on the other hand, decreases it. Again, in order to the free, easy production of liquid movements, it is necessary that the blood-vessels be comparatively well filled. For instance, it is well known that salines, which act principally by osmosis, act with difficulty or not at all, if fluids have been withheld for two or three days previously.

What, now, is the condition of the intestines after most cœliotomies? In ordinary uncomplicated cases, where there has not been much irritation of the abdominal or pelvic contents, there will generally be no difficulty about producing catharsis after thirty-six or forty-eight hours. But in those cases where the dissection of tumors, etc., has been difficult and prolonged, where there has been severe manipulation of the intestines, with perhaps direct and intense irritation of ganglia and plexuses, there is generally a more or less severe irritation of the intestines. This manifests itself by paroxysmal pains, often extremely severe, which are caused by spasmodic and irregular peristalsis. Autopsies in cases dying with symptoms of intestinal obstruction, accord-

ing to Ashton, have shown a tetanically contracted portion of intestine with dilated intestine above it.¹ This occurs by reason of severe irritation of the sympathetic nerves supplying that portion of intestine by which it is thrown into a condition of tonic spasm. This condition exists in a modified degree after all severe celiotomies.

I do not mean that tonic spasm of the bowel always exists, but that it may occur oftener than is known, and that there is *always* over-irritation of the motor nerves of the intestines, causing irregular, obstructive peristalsis. If at this time stimulating cathartics are given, the only result will be that fuel will be added to the fire, and reverse peristalsis be produced, because normal downward peristalsis cannot be established. In this way is to be explained the difficulty so frequently met with in early effort to move the bowels. The indication, then, is to severely abstain from everything that tends to *stimulate* peristalsis until, by the subsidence of the pain or the natural escape of flatus, we can perceive that normal peristalsis is re-established, and the conditions are favorable for gentle, unirritating catharsis.

If this abnormal activity of the intestines be severe or prolonged, great benefit will be obtained by the early hypodermic administration of a free dose of codeine. It not only relieves pain and quiets the patient, but it relaxes intestinal spasm, and allows the re-establishment of normal, painless peristalsis. In this way, it is an aid to catharsis rather than a check.

It is a benefit and blessing to the patient and in no sense an injury.

Again, in the early hours following an abdominal section, the flow of liquid is toward the peritoneal cavity. There is always a marked effusion of serum, sometimes very great. This depletes the intestinal blood-vessels, and in this way renders the production of catharsis much more difficult. Much will be gained, therefore, by waiting till this current is checked and the blood-vessels have been given time to replenish themselves from the fluids in the tissues; even then it will be of benefit to precede the administration of salines by a rectal injection through the long tube of at least a pint of hot water, which will be rapidly absorbed by the thirsty vessels. Then the introduction of a concentrated solution of sulphate of magnesia will easily establish the flow of fluid toward the intestinal canal and promote the rapid absorption of the fluid present in the peritoneal cavity. Thus good intestinal drainage is established. The effusion of serum into the cavity is checked, the culture medium of pyogenic germs is removed and septic peritonitis is prevented.

The question of drainage, either by tube or gauze, I shall not in this paper have time to discuss. Theoretically, it is, in such cases, desirable; practically, each operator is governed by his own personal experience.

If septic peritonitis is fairly established, the forlorn hope is to re-open the cavity, thoroughly flush and establish free and complete drainage, both through the wound and the intestinal canal. It will be difficult to establish intestinal drainage, because of the over-distension of the muscu-

¹ Ashton, in paper on Intestinal Obstruction, read before the American Medical Association, 1892

lar coat by imprisoned gases. To remedy this, and thus allow the muscular fibres to regain tone, a free incision into the intestine (as recommended by Dr. Henrotin, of Chicago),

with, perhaps, the establishment of a temporary artificial anus, will be good surgery, and may be the factor by which the question between life and death will be decided.

Mcchanical Action of the Intestines on the Uterus.

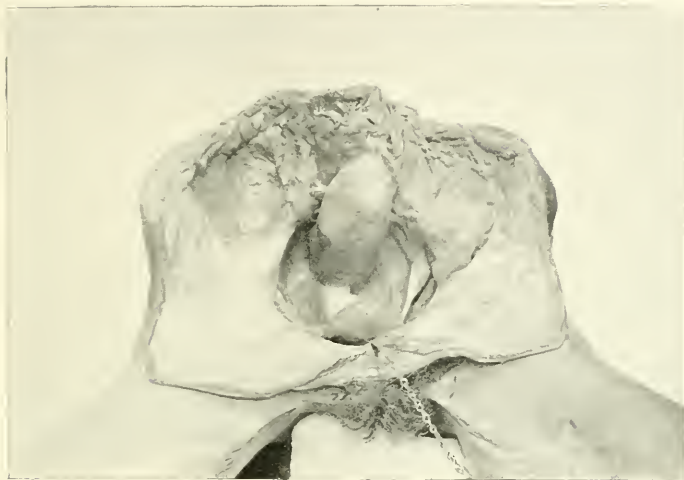
BY J. M. KEATING, M.D.,
COLORADO SPRINGS, COL.

PLATE I.

A LOADED rectum naturally occupies a very conspicuous place in the minds of physicians as a cause of disease, both from the absorption of the fæcal poisons and the mechanical action of its contents. But should we not pay more attention to the condition of the small intestine, as tending to influence the growth and development of the other pelvic organs? The small intestine occupies a very large portion of the abdomen, and, being much freer and more movable, adapts itself to the spaces which are not otherwise taken up—acts in this way as a cushion as well as a barrier to free movement. Civilization has had one deleterious effect on digestion, and even at this date, when knowledge should have taught us better in the matter of starch diet, we totally neglect salivary digestion in the adult, and in the babe who is bottle-fed the exception is not to find starch, in some form, a portion of diet. The uncivilized either chew their grains till the teeth are even to the gum, or cook their food so thoroughly that a starch granule plays no part in the processes which come after; but the

business man bolts his oatmeal porridge, newspaper in hand, at the breakfast table—and his children follow his example—and not infrequently hot cakes and hot bread follow upon this pasty foundation. The father hurries to his office and immediately plunges into the affairs of the day, to meditate at leisure at no early date upon the causes of that complaint, dyspepsia, which he attributes to everything but the right one. No wonder we hear so much of fæcal accumulations, appendicitis, gastro-intestinal catarrh and such like complaints. The wonder is that anyone lives out his expectancy of life. Undoubtedly the world would be very much happier, both mentally and physically, could the dyspepsias which are caused by errors in diet be avoided by following the few simple rules which the slightest knowledge of physiology and hygiene could impart to those who will follow them. If the business man would pay more attention to his digestion, the world would be happier; if the mother would be more attentive to the feeding of her babe, the sacrifice of life in infancy would be far less and the

PLATE I.



FRONT VIEW.



OBLIQUE VIEW.

Pelvis with rectum and bladder distended, showing space occupied by intestines normally, and by uterus if retroverted.

[See page 8.]

world would be numerically and physically stronger. But, possibly, what we physicians look upon as a preventible measure, and one to be strongly counteracted, is really an effort of nature to keep down the population! Tainted milk and starch granules are the cause of the immense mortality of human life under the first year; but they are also the cause of an infinite number of diseases which are the result of faulty development in those that do survive.

It is my purpose in this short paper to dwell upon the influence the small intestine has upon the production of disease in the pelvis, and its influence, by mechanical pressure, owing to the indigestion which arises from improper feeding. We all know that the starch granule, for its proper digestion, needs the action of the salivary glands, and the digestive juices which it receives after leaving the stomach for its proper digestion, and that when these fail to act decomposition is the result and flatulence and acidity are its principal manifestations. The abdomen of a babe that has been fed on starchy food which is not digested is usually enormously distended, until finally the diarrhoea from irritation sets in, which eventually will carry it off. This distension in a rickety babe so interferes, by its presence, with the anatomical development that the stomach assumes undue proportions and presses on the thoracic viscera enough to interfere with their action and that of the small intestine, to distend the lower ribs and aid in the production of the flange-shaped thorax. But I believe, also, that the pelvic organs of the girls suffer from the same sources, and that possibly

the cause of the many displacements which we find in the growing uterus are due to the intestinal dyspepsias of the child, which are the result of improper diet.

In many of the text-books, which are used even at the present day, the antero-posterior pictures of the pelvis exhibit the most marked inaccuracy in their delineations of the relative positions of the organs of the pelvis. They usually represent a distended bladder, a uterus with an inflated vagina and an enormously inflated rectum; whereas we all know a large amount of space exists between the uterus, which hugs closely to the bladder and the rectum, and that in the normal condition in the adult this space is occupied—and indeed must be, for there is nothing else to occupy it—by the small intestine, but that when this small intestine becomes unduly loaded with gas its coils gradually unfurl, naturally they must rise to the pelvic brim and that organ which has least resistance must occupy in some manner the space thus vacated—and this must be the uterus. The position of the round ligaments and the close attachment of the uterus at its lower part to the bladder, must necessarily cause it to rise and straighten as the bladder fills; and, indeed, it seems as if its proper position in the pelvis was mainly due to the support which it gets from the round ligaments—a point which tends strongly to prove the value of Alexander's operation. This is well exemplified in the two photographs that accompany this article. They were taken some years ago by me when preparing a short paper, with the assistance of Dr. W. A. Edwards, upon the cause of acute

retro-displacements of the uterus in virgins. This matter was published last year in this journal by Dr. Edwards, who detailed the cases that prompted the study of this interesting subject. These photographs show the rectum as distended as much as it possibly can be, and in a very clear manner demonstrate the cavity of the pelvis in which the small intestine normally lodges. It will be seen that not alone are rectal accumulations accountable for the many distressing symptoms that arise obviously from pressure, but that the ovaries are also at the mercy of the small intestine when that viscus exerts pressure upon them; and it will also be seen how, in the narrowed pelvis of infancy, the

distended small intestine, acting above the pelvic brim, can so press upon the fundus uteri, as it rises with the bladder, as to produce a decided ante-flexion from the yielding of the neck, which is the most vulnerable point. It has occurred to me that this is probably one of, if not the principal cause, of the acute flexions which we find so constantly associated with the dysmenorrhœa of young girls; and, if so, does it not impress upon us one more great reason why the diet of infants should be most carefully regulated, in the endeavor to develop to their full anatomical perfection those organs which are so important in the production and maintenance of health of the girl after puberty?

Ectopic Pregnancy in the Later Months.¹

BY JOSEPH TABOR JOHNSON, M D.,
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THE treatment of extra-uterine pregnancy in the earlier months is no longer a vexed question. So little has been accomplished by either medicine or electricity, that the laity, as well as the great bulk of the profession, has come to regard cœliotomy, and total removal of the gestation sac, as the surest and safest treatment.

Electricity, especially in cases of doubtful diagnosis, and in districts remote from skilled operators, has its advocates, and very properly so, as much less harm will be accomplished

by its use, than by unskillful surgery, in an unsafe environment. No doubt exists in any well-informed mind as to the advisability of the radical operation in all ruptures of the gestation sac, even in the desperate cases. To wait for reaction while internal hæmorrhage is exhausting vitality, and resorting to opium and stimulants, is no longer practiced by intelligent men. The folly of this worse than inaction has had such a ghastly array of fatal results, that it would take a brave man to counsel delay.

But the case is different when ectopic pregnancy has passed beyond the fifth month, and the child is known to be viable.

¹ Read before the section of Gynecology and Abdominal Surgery of the First Pan-American Medical Congress.

The possibility of favorable development and the final removal of a live child greatly complicates the situation, and the question may, and often does, assume ethical and theological aspects, which may possibly never be definitely settled. Where these considerations embarrass an already difficult surgical indication, the solution of the problem will ever remain more difficult than where simply doctors disagree. If it were certain that this development would proceed without accident, after the ectopic pregnancy had passed the rubicon of the first half of gestation, there would be little doubt of the wisdom of delay, but the possibilities are so great of a suddenly fatal termination, that no dependence can be placed in this doctrine of chance, which amounts to worse than gambling with human lives entrusted to our care. Unfortunately for the child, we can only be reasonably sure of the present moment, so far as our patients are concerned, and I am glad see the brightening indications that point toward the same opinion which the profession has reached in regard to placenta prævia.

Few well-informed men live in this age who do not believe that the woman's only safety lies in the complete evacuation of her uterus at the earliest possible moment when the placenta is prævia, after a diagnosis has been made.

The roads marked "delay," "leave to nature," and "expectant treatment," are so filled with tombstones, bereaved relatives and friends, that the deluded and timid advocates of these delusive and fatal practices find little room to navigate their lonely way.

Medicine not being an exact science, we are unable to promise favorable results in all cases, but with the recent wonderful advancements of abdominal surgery, we can do much more than our fathers could to save human life, even when threatened by the dangers of advanced ectopic pregnancy.

The great difficulty in dealing with the placenta has detained many from operating until two or three months after the child was known to be dead, and the placental vessels are so certainly atrophied as to avoid the danger of hæmorrhage. Even in these cases the doctrine of chance has not a few advocates. Some women have lived many years with a mummified fœtus, and have finally died of something else. Others have survived the results of decomposition, abscess and discharge of fœtal bones through bladder, vagina, rectum and abdominal wall, and why cannot more women survive these dangers? But the statistics of Shauta clearly show that many have died from the immediate effects of visceral perforation, or from the exhaustion resulting from ulceration and discharge, or remained permanent invalids.

The chief object of this paper is to recommend the removal of an extra-uterine fœtus in all cases as soon as the diagnosis is made, and the gestation sac and placenta whenever possible, whether it be the second, fourth, seventh or ninth month. If the child can be saved victory is still greater.

As in placenta prævia, the dangers increase with the development of the placenta. The greater surface to bleed the more the danger from hæmorrhage. In some cases it may turn out to be safest to follow stand-

ard authority, and leave the placenta undisturbed, with its tied cord protruding from the lower end of the wound, and subsequently remove it after its circulation has dried up; or if no sepsis occurs, it may be left to come away piece-meal, or become encysted and absorbed, as occurred in two cases reported by Lawson Tait.

In May of this year Lusk reported thirteen cases, including one of his own, where coeliotomy had been performed with the foetus living, in the second half of ectopic pregnancy, viz.: to those of Breisky, Brown, Eastman, Jessup, Rein, Lazarewitsch, Lusk, Martin, Olshausen, Shauta, Taylor, Treub and John Williams. A study of these pioneer cases and their careful analysis by Lusk shows that in the evolution of this operation we are already getting beyond the realm of chance in dealing with the placenta, and are successfully attacking its entrenchments in the rear by enucleation and ligation of its vessels beyond the placenta, the general ooze from the united small vessels and torn surfaces being compressed by packing with iodoform gauze after the separation and delivery of the after-birth.

Lusk saved his patient by vigorously compressing the abdominal aorta while completing the placental separation and a final packing of gauze in a Mikulicz pouch.

Jessup and Taylor left the placenta untouched, with cord hanging out the lower angle of the closed abdominal incisions. In Jessup's case the putrescent placenta was two months and a half in discharging itself and curing the patient.

In Taylor's, the abdomen had to be reopened on the twelfth day on ac-

count of the gangrenous condition of the cord and symptoms of septicæmia.

The hæmorrhage following the separation of the after-birth "was with difficulty controlled by the pressure of a large sponge, wetted with a dilute solution of perchloride of iron." It took her three and a half months to get "quite well."

Lusk says: "Both these cases belong to the domain of miracle, and do not invite imitation."

Olshausen, by tying the vessels in the broad ligament beneath the placenta, was able to remove it completely without hæmorrhage.

Fernwald found the placenta attached not only in the folds of the broad ligament, but to the under side of the uterus. He tied the vessels in the ligament, and clamped and removed the portion of the uterus which bled; a few stitches and some iodoform gauze saved the day. The patient was discharged cured in two days more than two months.

John Williams' and Treub's cases did not vary much from Jessup's and Taylor's.

Martin first deliberately and intentionally tied the vessels beneath the placenta and by the side of the uterus in the seventh month of ectopic pregnancy, and removed this organ without loss of blood. He closed the sac above and drained through an opening below, punched through the cul-de-sac into the vagina.

Breisky and Eastman both operated successfully in the eighth month, removing the entire ovum. They ligated the vessels under the placenta. Eastman "was able to clamp the uterine end of the tube and the broad ligament, and to cut away the portion which contained the ovum."

In February, 1890, Professor Rein, of Kiev, successfully enucleated from the peritoneum an eight-months' foetus, with placenta and membranes, in the same manner as we enucleate an intra-ligamentous ovarian tumor.

It will be seen by the foregoing evidence, that as in ovariectomy, hysterectomy and appendicitis, this operation is undergoing the various stages of evolution, resulting finally in the saving of more than a dozen women and a number of children. We are in a position at least to say, that women far advanced in ectopic pregnancy need not be left without surgical operation outstretched to help them and their worse than unborn children; and on the theory that "what man has done, man may do," we can now advise, with a clearing conscience, coeliotomy and complete removal of the foetus, placenta and membranes.

Though a large majority of these operations have been done abroad, Eastman and Lusk have added lustre to the already bright reputation of American surgery by their brilliant operations. There is much ground for the hope and belief that Pan-American surgeons may equal, if not excel, in this, as well as in other branches of abdominal surgery.

I beg your indulgence to the narration of the brief histories of two cases in which I operated—in one eight and in the other twelve months after conception.

In the first case the patient was aged 32, the mother of three children. Her periods had been regular for several years. After missing two months she had all the symptoms of tubal rupture, and was dangerously ill for several weeks. After recovery

her abdomen began to enlarge upon the same side, and continued to grow for five months. She had some of the symptoms of pregnancy, but no one thought in the country where she lived that she really was with child. Seven months from the first missed period she began to fail in health, and was treated for malaria and subsequently typhoid fever followed by peritonitis. She came to Alexandria for better treatment and came under the care of Drs. Jones and O'Brian, who requested me to see her in March last, after discovering an abdominal tumor.

I found an invalid, pale and emaciated, with a pulse of 130 and a temperature 96° in the morning and 104° in the afternoon, with night sweats, frequent chills, no appetite and unable to walk out of the house.

She had a well-defined tumor in her left side, which we all believed to be undergoing suppuration and to be the cause of all her troubles. She was thoroughly septic. No one made a positive diagnosis, but all agreed that an operation afforded the best chance of recovery. The usual preparations were made and the abdomen opened in a relative's house in Alexandria.

Most extensive adhesions were encountered in all directions. A fluctuating point in the tumor was tapped and a quart or more of the offensive gray-colored fluid came away. In proceeding with enucleation of the tumor my fingers tore into the sac and a child's foot and leg protruded. The opening was enlarged and a macerating and decomposing eight months' fetus was easily removed with the placenta. The specimen is now preserved in the Army Medical

Museum. It was found to be impossible to cleanse the sloughing sac and stitch it to the abdominal wall, as I wished to do, as it tore open in several places and putrilage was freely admitted to the abdominal cavity. Much time was spent in separating dense adhesions from the bladder, uterus and ligament. The abdominal cavity was finally made clean and the wound closed with a glass drainage tube left in. The patient never rallied and died on the next day. I believe now, if a correct diagnosis had been made and the sac incised, the fœtus and placenta rapidly removed, and the sac well stitched to the peritoneum, cleansed and packed with gauze, the patient would have recovered.

Case II.—Mrs. B., aged 36, mother of two children, the youngest 11 years of age, menstruated in the latter part of March, 1892. Early in May, while at the house of a friend, she was suddenly seized with violent pains in the hypogastric region, passing backward to the rectum. A physician was summoned who gave a hypodermic of morphia and made hot application to the abdomen and perineum. One month later there was a similar attack. There had been no appearance of the menses. On examination, the physician found a large mass between the vagina and rectum which was very sensitive to the touch and which he thought to be a tumor. She informed the physician that she thought she might be pregnant, but in this view he did not concur. Several attacks of less severity occurred at intervals of about three weeks. Early in August movements of the fœtus were felt, and this, of course, established the existence of pregnancy.

In the latter part of November there was said to be an escape of liquor amnii. On the fifth of December about a pint escaped, and there was evidence of the onset of labor. After this date no signs of foetal life were manifested. On the twenty-third of January it was determined to bring on labor, and a gum catheter was introduced *ten* inches and permitted to remain thirty-six hours, when another was substituted for a similar period without provoking uterine contractions. After consultation the patient was etherized and the cervix dilated until the smallest sized Barnes' bag could be introduced, but beyond this nothing larger could be inserted. *The doctor* said he introduced his finger into the dilated uterus and felt the child.

No labor followed these efforts, and the lady decided to come to Washington, where I saw her, February 23, at her father's house. External examination of the abdomen revealed the fœtus lying in an oblique position, the larger and lower extremity being in the right iliac fossa, the smaller to the left and above the iliac crest. Internal examination detected cervix apparently corrugated in a longitudinal direction. The patient was kept under observation, and March 16 she called at my office for further examination. Her pulse had ranged for weeks from 90 in the morning to 120 in the afternoon. Through the speculum I passed a sound two inches, but could not make it pass further. March 21, Dr. F. C. Smith was called in consultation with Dr. Joseph Tabor Johnson.

The existence of intra-uterine pregnancy was doubted until the physician who had had charge of the case stated that he had actually felt the child *in*

utero when he introduced his finger after the dilation with Barnes' bag.

Dr. Johnson thought, notwithstanding the history given by the Nova Scotia physicians, where Mrs. B. resided, that the case was one of abdominal pregnancy, and Dr. S. C. Busey was added to the consultation. He could not decide whether the foetus was inside the uterus or not. With two fingers against the cervix it was felt to move when the tumor was pushed about with the other hand applied externally. The patient was now twelve months pregnant.

She came to my private hospital April 6, 1893, and was anæsthetized on the following day and the uterus demonstrated to be empty and of normal size. I familiarized myself as much as possible with the tumor and its environment. A week later I opened the abdomen in the presence of Drs. Adams; Bowen, Smith, Fry and Stone. The omentum was adherent to the tumor, but easily separated. Passing my hand down into the right iliac fossa, I found to my delight that the mass was not

adherent, and immediately lifted the bulk of the tumor out of the abdomen. The uterus and right ovary, tube and broad ligament were free. The foetus had developed in the left tube until rupture, and then in folds of the left broad ligament. From underneath the unbroken gestation sac was enucleated and rolled out on the table; only one vessel needed ligation. Much of the ligament was trimmed off and ligated close to the uterus. No cleansing of the cavity required and no drainage tube. Abdomen quickly closed and patient put to bed in half an hour.

She sat up on the twenty-first day and went home on May 18, one month from the date of her operation, and recent letters report her perfectly well. She lives near Halifax, where her husband is the American Consul.

Upon opening the specimen it was found free of amniotic fluid, and contained a full term foetus with its placenta and membranes, which is preserved in the Army Medical Museum in this city.

The Intra-uterine Tampon.¹

BY ANDREW F. CURRIER, M.D.,

NEW YORK.

IF we recall the developments of the past fifteen years we cannot avoid the conviction that gynæcology, both as a science and an art, has progressed at a wondrous pace. In the pre-antiseptic days the surgeon, who made a practice of entering any of the organs or closed cavities of the body, was considered bold to the verge of rashness. The same judgment was applied to those who habitually invaded the uterus with hands or instruments, for purposes of exploration, medication or surgical procedure, whether the organ was impregnated or unimpregnated. With the knowledge which is now at our command we can almost unhesitatingly enter almost any organ or cavity of the body, it being presupposed that the entrance will always be effected in a decent and cleanly manner and without an undue exhibition of violence. Of all the organs with which antiseptic surgery has made us practically familiar, none is more tolerant and long suffering than the uterus, and yet it occasionally happens that a sharp reproof is required as an admonition that we must not presume too much upon this tolerance. Notwithstanding all the work that has been done by those who have investigated the physiological and pathological conditions pertaining to the uterine mucous membrane, we are just beginning to appreciate their

significance. The work of Recamier, Sims, and the few of their followers who were bold enough to imitate them in the use of the sharp uterine curette was for years looked at askance by multitudes of the profession in the same way that they devoutly uttered the formula, "meddlesome midwifery is bad" whenever they came to complications which, from timidity or ignorance, they would not face. There is always an excuse for ignorance, provided it does not prevent others from doing the right thing, and so it may be that we should speak kindly of all those who could not follow Recamier and Sims in what seemed in their day unreasonably bold procedures.

With the era of antiseptics and greater cleanliness, and the increased knowledge of the histology and pathology of the endometrium, it has come about that if bad results attend the use of the curette, the fault belongs principally to the gynæcologist for selecting a bad moment to operate, or for failure to properly prepare himself or his instruments.

With the advances in gynæcological and obstetric knowledge have come the various devices for dilating the uterus, whether unimpregnated or parturient, the rubber bags dilatable with air or water, the wooden, metallic, rubber and glass dilators and stems, and the recognition that the most excellent results are possible from the use of such agencies. The value of tents of various materials as

¹Read before the Section of Gynæcology and Abdominal Surgery at the Meeting of the Pan-American Medical Congress, September, 1893.

dilating agents is not denied, but decided objections could be offered to any and all of them.

An important fact, which has only recently been generally appreciated, is that there is no more wisdom in retaining vicious secretions within the uterus than in any other portion of the body, and that the surgical principle of drainage, which is applicable and valuable for other portions and cavities of the body, is equally valuable for the uterus. This is the basis upon which the present extensive and, I think, rational practice of intra-uterine treatment rests; dilatation, curetting and drainage are the three foundation stones.

From the propriety of dilating the uterus to that of packing it with a tampon, is a short and logical step. The usefulness of the vaginal tampon has long been recognized, as well as its inefficiency in many cases, for the reason that it does not directly reach the source of the trouble. I have frequently seen cases in which all the tonicity of the vaginal muscle was lost on account of the frequent and extensive packings to which it had been subjected.

For the relief of hæmorrhage from the uterus, Fritsch and Vulliet were the first, so far as I know, to demonstrate that the capacity of the unimpregnated uterus could be greatly increased by the gradual introduction, day after day, of plugs of antiseptic cotton, and that such a procedure would enable one to treat certain diseased conditions of the organ with a facility and success which had previously been unknown. The tampon, therefore, has practically opened a new field in intra-uterine therapeutics.

MATERIALS FOR THE TAMPON.

The conditions which must be satisfied by tampon material in order that it may accomplish the desired effect are, that it should be easily managed, that is, easily introduced and removed, antiseptic, soft, distensible and with good draining properties. Substances which are available are absorbent cotton, carded wool, antiseptic gauze, antiseptic jute, charpie, wood wool, etc., all of which have been used for drainage purposes in other parts of the body.

It will not be necessary to discuss at the present time the advantages and disadvantages of all these materials. My preference is for antiseptic gauze, carded wool or absorbent cotton, in the order mentioned. I have not yet used the carded wool for this purpose, but it seems to me to present peculiar advantages in its lightness, softness, cleanliness and compressibility.

Absorbent cotton, which is recommended by Vulliet, is easily managed, absorbs fluids with great avidity, and drains readily, but it is converted into a hard mass by the fluids which it absorbs, and is often exceedingly uncomfortable to the wearer.

I prefer antiseptic gauze to anything I have yet tried. It is easily introduced and removed, adapts itself readily to the uterine cavity, imbibes fluids with avidity, and allows them to drain, swells without becoming unduly hard, and if not too firmly packed does not usually cause discomfort. It should be inserted in strips an inch wide and eighteen inches long, the cavity having first been sufficiently opened with a Sims' or other suitable dilator. It can usually be retained three days without

danger or inconvenience from decomposition. Either plain, sterilized or borated gauze may be used, and I prefer one of these to the bichloride or iodoform gauze, which is not without danger from toxic absorption. The tampon may be used both in the impregnated and the unimpregnated uterus, and the condition may be tabulated as follows :

I. THE IMPREGNATED AND PUERPERAL UTERUS.

- (1) During the period of gestation.
- (2) During parturition.
- (3) Post partum whether the labor occur at term or prior to it.

II. THE UNIMPREGNATED UTERUS.

- (1) Exploratory and operative purposes in connection with disease of the uterus and its appendages.
- (2) Hæmorrhage.
- (3) Endometritis.
- (4) Stenosis.
- (5) Accumulations within the tubes.

I. THE IMPREGNATED AND PUERPERAL UTERUS.

- (1) During the period of gestation.

There are many conditions associated with the impregnated uterus which has heretofore been treated and with fair success by tampon of the vagina, the pressure of the tampon being the efficient agent. This method, however, is often indirect and troublesome, and should yield to the more logical and effective method of tamponnade of the uterus. Of course there are cases in which a tampon of the vagina is indicated, and yet others in which both uterus and vagina may be tamponed with advantage.

Tampon of the uterus is indicated when an abortion is imminent or is

necessitated. It may be employed for the purpose of bringing on uterine contractions and emptying the organ, or it may occasionally be efficient in warding off an impending abortion. In the latter case it must be used with the greatest caution and wisdom ; it must not be too firm, it must not extend beyond the os internum, it must be reinforced in most cases by a tampon of the vagina, and it must not be retained long enough to bring on labor pains.

In cases of placenta prævia it will be of great service in checking hæmorrhage, and will sometimes enable one to carry patients safely through gestation, when otherwise great loss of blood or interruption of pregnancy would result. If an abortion is necessitated on account of uncontrollable vomiting, the presence of a dead fœtus, or a serious mechanical obstruction in the birth canal, the use of the tampon seems to me entirely preferable to the means which have heretofore been in use for bringing on labor, whether bougies, bags or tents. It is clean ; it is efficient ; it works with reasonable rapidity ; it is less likely to produce injury to the uterus or be followed by bad consequences than almost any other means for accomplishing the same purpose with which I am familiar.

- (2) During parturition.

In a prolonged first stage of natural labor in the primipara, and in others with whom the cervical tissues are unduly rigid, the delay is often very vexatious, both for patient and physician. There can be no objection to helping nature in such cases if it be done cautiously and discreetly. I am aware that this will be called meddlesome and mid-

wifery, and would say in advance, that if one is not familiar with operations upon the cervix uteri, and with the use of instruments upon that organ, he should, by all means, leave the case to nature, or get suitable assistance. There are numberless cases, however, in which the life of a child might be saved, and the welfare of the mother enhanced in the abridgement of pain and the avoidance of puerperal mishaps, if the first stage of labor were suitably hastened. This may be done by placing the woman in Sims' position when the pains have ceased, introducing a large Sims' speculum, steadying the vaginal portion of the cervix with a volsella, carefully and slowly dilating the cervical canal with a Sims' dilator, and then introducing a few strips of sterilized gauze into the canal as far as the lower pole of the advancing foetus. The result is the same as is accomplished by the hydrostatic or air bags, and enables one to dispense with these aids, which are so apt to be out of order at the very time they are needed.

(3) Post-partum, whether occurring at term or prior to it.

When Dührssen suggested the tamponnade of the uterus for post-partum hæmorrhage, the suggestion was received with incredulity, almost with ridicule. To effectively tampon a bleeding, viciously inert uterus is, indeed, an operation for which one is not ordinarily prepared. The quantity of gauze which can be stuffed into such an organ is almost unlimited, and there is no time to send for supplies when the emergency is at hand. But one can always carry half a dozen rolls of sterilized gauze bandages three or four inches wide, and

if this is insufficient, clean pocket handkerchiefs, or strips from napkins or pillow cases, are almost always available.

Of course, there must be no suspicion of dirt about anything which is introduced into the uterus, and the material must be removed at the earliest practicable moment. This operation has proved a life-saving measure in so many instances that it must now be regarded as one of the legitimate expedients in severe *post-partum* floodings.

In hæmorrhage, which occurs after abortion, the intra-uterine tampon will be found quite as effective as in similar accident at term, and the operation in the former case can usually be done with more deliberation and precision than in the latter. In cases in which there is septic material within the uterus after labor or abortion, the intra-uterine tampon will sometimes be of service. In such cases curettage or irrigation are of equal importance with the tampon, and may even be required in place of the latter. But the possibilities for usefulness, which the tampon has in this class of cases, cannot be overestimated, and I can speak with the greatest satisfaction and assurance of the valuable aid which it has rendered me in my practice.

The tampon is also useful in cases in which the uterus contracts imperfectly or irregularly after labor or abortion, the condition which is commonly known as sub-involution. The tampon stimulates the uterus to contraction in such cases, relieves the turgid veins, effects good drainage and may prevent protracted or even serious disease.

THE UNIMPREGNATED UTERUS.

(1) Exploratory and operative procedures in connection with disease of the uterus and its appendages.

All forms of new growths are included in this category, whether benign or malignant. In many cases the tampon will be unnecessary, sufficient dilatation being obtainable by means of the Sims' or other similarly acting dilator. There are cases, however, in which it is desirable to proceed slowly or to obtain a greater degree of dilatation than is warranted by the rapid method, as in those in which intra-mural myomata are to be enucleated, or others in which the uterus is to be removed for cancer, in which a preliminary curettage and tampon will better prepare the organ for safe removal, and insure less danger from sepsis.

In cases in which the appendages are to be removed for inflammatory disease, and in which the endometrium is more or less involved in the same process, curettage and tampon of the uterus prior to the operation will often prove a useful measure, especially by favoring drainage from the congested uterine vessels, the tampon being allowed to remain *in situ* two or three days. In general, the field which has heretofore been occupied by the uterine tent, of whatever material composed, may be properly appropriated by the judiciously managed tampon.

(2) Hæmorrhage.

As I have already remarked, the vaginal tampon is often a clumsy and indirect means for the relief of uterine hæmorrhage, though there are many cases in which it seems to produce sufficient pressure to accomplish the desired end.

To apply the pressure directly to the bleeding surface is far more rational, and can usually be accomplished with as much facility as in the more direct procedure. There are many forms of hæmorrhage for which this treatment is applicable. One which has heretofore been treated almost exclusively by the use of more or less nauseative drugs is the profuse menstruation in girls and young women, especially in those who are anæmic and can ill afford this exhausting drain upon their vital resources. Undesirable as the dilatation of the vagina and uterus in girls and young women may be, from the sentimental standpoint, such a disadvantage is far outweighed by the benefits which are obtained by the effectual checking of the unnatural flow. The use of the tampon for such a condition must be accompanied by rest in bed, and it may be necessary or desirable to administer an anæsthetic before the tampon is introduced.

Hæmorrhage from the uterus requiring the tampon may also result from hypertrophy and inflammatory disease of the endometrium, congestion due to malignant disease or fibroid tumor, or to disease of the adnexa, retention of the decidual membrane, etc.

Curettage should be a preliminary procedure, though there are doubtless cases in which this step may be safely omitted. The quantity of tampon material which should be used, and the period of time during which it should be continued, are questions which should be answered for each individual case.

(3) Endometritis.

The endometritis with which hæm-

orrhage is the salient symptom has already been referred to, but there are other forms which do not present this symptom, which are equally amenable to treatment with the curette and tampon. Such are the suppurating form, the hypertrophic form with excess of glandular secretion, and the form which is associated with inertia and atony of the uterine muscle and stasis of the venous circulation, the latter form being most frequently associated with subinvolution of the uterus and sometimes persisting months or years after the labor from which it had its origin.

In all these varieties of endometritis the value of free drainage, depletion of the tissues of the uterus, and avoidance of the absorption of decomposing and septic material, cannot be over estimated, and their proper appreciation will tend to the solution of many disagreeable questions in connection with prevalent cases of uterine disease.

(4) Stenosis.

The value and significance of mechanical obstruction within the uterine canal, especially with reference to the influence of flexions and versions of the uterus upon the outflow of its contained fluids, have been the source of ardent controversy on the part of writers upon uterine pathology and therapeutics for many years. If the propositions enunciated in this paper in regard to drainage are based upon fact, they certainly apply to those cases in which stenosis of the uterine canal, either from congenital insufficiency or acquired malposition, prevents free egress of any fluids which may be within the uterine cavity.

It is conceded that there are plenty of instances in which the canal is pat-

ulous while the secretions do not flow freely, or at any rate are associated with dysmenorrhœa, but this does not disprove the statement that narrowness of the canal or a bend in its course will prevent free egress of fluids. Furthermore, we have the positive evidence of experience, in many instances, that widening and straightening the canal does allow free exit to fluids, and does result in relief to the pain which was periodically experienced before the change in the mechanical conditions was effected. It is, therefore, believed that such treatment rests upon entirely rational foundations, and also that the intra-uterine tampon offers one of the best, if not the best, means for accomplishing this end.

Whatever may be said in favor of stems and tents for the relief of stenosis they are all open to objections of one kind or another, and it is believed that in the tampon we have a substitute which can satisfactorily displace them all.

(5) Drainage of accumulations within the fallopian tubes.

The usefulness of the tampon for this indication seems to me to be very limited. As a means of depleting the uterus itself, even when the cornua are infiltrated, it serves a good purpose, as I have seen in a number of cases. Also as a means for the drainage of accumulations of pus, blood or serum in those portions of the tubes contiguous to the cornua, it has a decided value, but if the tubes are distended and displaced downward and fixed by adhesions in such a malposition, and if they contain distinct loculi, separated from each other by impervious septa, the fluids which they contain would apparently be quite beyond the reach

of any attraction which could possibly be exerted upon them by any substance with which the uterine canal may be packed.

Such unfavorable conditions are far more numerous than the favorable ones, and their treatment by temporizing or palliative measures may be not unattended with danger. Besides, inflammatory disease of the tubes is so often associated with similar disease of the ovaries that an attempt to relieve the former by drainage, even if possible and successful, would in very many cases afford only half a solution of the problem under consideration.

METHODS OF USING THE TAMPON.

Polk's broad proposition that the tampon should be introduced with all the precautions and all the adjuncts of any surgical procedure, including the administration of an anæsthetic, is, of course, susceptible to limitations.

In the use of the tampon for post-partum hæmorrhage the urgency of the situation will forbid the deliberation and attention to details of a less serious condition, and in many other cases in which the uterine canal is patulous, the tissue soft and dilatable, and the patient not unduly sensitive, an anæsthetic will be unnecessary. I have proved this many times in office and dispensary practice. For other cases, safeguards which Polk mentions are timely and requisite.

It has already been suggested that the introduction of the tampon should be preceded, as a rule, by curettage, irrigation, and a sufficient degree of dilatation to allow the easy insertion of the gauze strips. Roughly speaking, if the canal is half an inch in diameter the gauze may be inserted with little difficulty.

The decubitus of the patient at the time of the operation may be left to the preference of the operator. I have sometimes used the lateral and at others the dorsal decubitus, while at others I have been obliged to change the one position for the other. The lower lip of the uterus may be steadied with a volsella while an assistant steadies the upper lip. The gauze, in strips of the required length, may then be passed as high as the fundus with long dressing forceps until the entire cavity is sufficiently packed. The firmness with which it is to be packed should depend upon the condition for which it is used, and its distensible property, as the secretions are absorbed, must not be forgotten.

I have not been able to use Polk's canula for the introduction of the gauze advantageously, nor do I like to recommend the augur-tipped introducer which the same author employs. It is too likely to cause injury in unskilled hands, and unskilled hands must frequently perform this operation.

The tampon may be retained from one to three or four days, according to the indication, and it may be renewed as often as necessary. I have kept up continuous dilatation in a myomatous uterus with advantage for weeks at a time. No particular rules are necessary concerning the method of removing the tampon; it may be gently drawn out with the fingers or with dressing forceps.

Concerning contra-indications, the tampon may be so modified as to quantity, firmness and duration of retention that I am unable to conceive of the impropriety of its use in any case in which intra-uterine treatment is admissible.

On the Value of Certain Methods of Surgical Treatment for Chronic Procidentia Uteri.¹

BY AUGUSTUS P. CLARKE, A.M., M.D.,
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IN the Hippocratic Treatises, under the title *περὶ γυναικείων* "De Morbis Mulierum," mention is made of uterine disease; procidentia uteri is recognized and is described with a striking degree of accuracy. Whether all the treatises referred to were composed by father of medicine or are the works of some other writer, they nevertheless bear evidence of having been written at a time prior to that of Aristotle. The treatment which for a long time was employed for prolapsus uteri consisted in the use of vaginal injections of astringent substances and in the maintenance of horizontal posture. When this method failed, pessaries of various devices were frequently employed. They were medicated, solid or of other character; they were resorted to as palliatives for overcoming the relaxation of the utero-vaginal structures. Episiorrhaphy was one of the earliest surgical measures undertaken for cases of procidentia uteri. The operation consisted in freshening the opposing surfaces of the labia pudendi and in uniting them by means of sutures. Thus, by lessening the lumen of the rima vulvæ it was believed that the uterus could be maintained in a nearly normal position, or could, at least, be arrested while in a minor degree of procidentia. This

measure of procedure has been far from satisfactory. In a case of procidentia uteri that came under my care some years ago, there had occurred strong adhesions which prevented replacement of the uterus. There was some enlargement of the organ, but this was evidently due to irritation consequent on the descent, and the congestion and the relaxation of the utero-vaginal tissues. In this case I deemed essential an operation for closing in great measure the pudendum; the patient had nearly reached the menopause, and had become free from the duties of exercising the marital relation. The parts readily united, and for a while the patient regarded herself as much improved. At the expiration of two years she returned for treatment. I found that she was beginning to suffer again from pain and irritation; that the united tissues were undergoing ulceration and had yielded from the superincumbent weight of the uterus. The patient was much exhausted and required rest; before, however, her general condition could be improved sufficiently to justify a resort to further operative measures she was seized with a fatal malady. In two other severe cases in which I resorted to this method, I found that after the lapse of time the parts yielded and the prolapse returned. Sims' original operation for overcoming prolapse was performed by scari-

¹ Read in the Section of Gynecology and Abdominal Surgery at the meeting of the Pan-American Medical Congress, September, 1893.

fying the anterior wall near the neck of the bladder; he denuded the surface so as to have two diverging lines. This method was found to afford relief, but it was far from yielding good results; it had to be improved before it could be regarded as a safe procedure. The cervix at length caught into a pouch thus formed; this subsequently caused much inconvenience to the patient. Emmet, recognizing the difficulties to be encountered in accomplishing this, believed that the operation would never come into general use. Emmet, in perfecting his operation, anteverted the uterus, and by means of a sponge probang he crowded the cervix into the posterior cul-de-sac. He then found some point on either side of the anterior lip, where the folds could be brought together without producing undue tension. These were denuded and the operation was completed. By this means Emmet claimed that he gained from the pelvic fascia a direct lateral support; this support, he thought, was independent of the column afterward formed from the tissues turned in along the anterior wall. In that class of cases in which there was only a partial prolapse, his operations were the same in principle; the folds of the tissue on the anterior wall were to some extent turned in until the parts were reached where the vaginal canal had not undergone undue dilatation. If the posterior vaginal wall be involved, or a rectocele be present, an operation on this tissue must be undertaken. A perineal laceration must also be attended to. A review of the methods here referred to for relieving prolapsus uteri shows that the object is sought to be gained by diminishing what is

commonly called a redundance of tissue and by bringing about a more direct lateral support from the approximation of the vaginal walls and adjacent pelvic fascia. However ingeniously this method of procedure may be carried out, the principle embodying this means of giving support is far different from the one nature originally instituted. The six ligaments, including the retro-uterine, are duplicatures of the peritoneum, and are, when unrelaxed, the essential supports of the uterus. The round ligaments are membranous productions of the peritoneum. They commence at the upper angle of the uterus and pass finally to the labia majora. Muscular fibres from the uterus, as well as vessels, nerves and connective tissue, are found to enter into their structure. The function is evidently important in lending support and motion to the uterus.

Relaxation of the uterine ligaments is not an uncommon cause of procidentia. The presence of muscular fibres in the round ligaments offers an explanation of the proneness of those ligaments to undergo relaxation. Congestion, inflammation and other disturbing processes occurring in the uterine tissue may lead to fatty degeneration, atrophy and to other changes in those structures, and may cause them to yield before the superincumbent weight. I have notes of four cases in which relaxation was brought on by this cause. In each of these cases there was no perineal and no cervical laceration. An unusually large and wide pelvis is not an infrequent cause of prolapsus. Such cases are much less amenable to treatment than are those cases in which prolapsus is due to relaxation of the

parts connected with the uterovaginal region. Ventral fixation of the uterus is an operative measure which has of late been undertaken for intractable prolapse. There are several ways in which this has been done. After abdominal section the broad ligaments, and also the round ligaments at their base, may be stitched to the abdominal wall. By this means the uterus may become fixed to the anterior wall, and may, for a while, afford partial relief. The ventro-fixation, however, is an unnatural one, and is liable to cause at times pain and much inconvenience, similar to what is often experienced whenever the uterus has become fixed in position by adhesive inflammation or by other morbid process.

A case of this kind not long since occurred in my practice. It was the result of an operation necessitating a partial removal of the right broad ligament in a case in which an abdominal section was resorted to for excision of a morbid growth. Ventro-fixation was tried in order to retain the uterus *in situ*. The operation was easily accomplished, but the patient subsequently complained at times of annoyance and inconvenience from the dragging sensation on the abdominal wall. In a case in which ventro-fixation is effected after the removal of the tube and ovary on one side by stitching the stump to the anterior abdominal wall, the fundal section of the uterus will subsequently be found unduly rotated toward that side, and the uterus itself will prove to be in a fixed state of anteversion. In a case in which the tube and ovary on each side are removed, ventro-fixation offers but a little more advantage than its adop-

tion in instances like those occurring in a case in which the adnexum on one side only has been removed, for if the stump of each pedicle is sutured to the wound or to the anterior abdominal wall, the uterus will become more or less anteverted from the fixation in its new position. Rotation of the organ to one side will most likely result from the unequal contraction at the point of fixation of the tissues brought into such union after they have become firmly cicatrized. The adoption of this mode of procedure offers no advantage over that of hysterectomy.

A uterus shorn of its adnexa can be of no possible material service to its possessor; under such circumstances it would hardly seem worth the while to endeavor to effect relief by stitching its fundus to the abdominal wall. In such a position it is liable to be a source of trouble, if not of much actual suffering. The operator may flatter himself that he has resorted to a most brilliant measure for relief, and the poor patient may fancy that she has had a remarkable escape from impending ills, and be loud in sounding the praises of her gynæcologist. If, however, it shall be her fortune to survive, time will not fail to undeceive her, especially after she attempts to resume her domestic duties; before she can escape the local suffering that is most likely to follow, other important surgical measures will have to be called into requisition for insuring permanent relief. The operation for shortening the round ligaments in cases of prolapsus uteri has, no doubt, in many cases been productive of much good. The striated muscular fibre entering into the structure of the

round ligaments invests them with the power of contractility. The presence of these ligaments in the human female tends to prevent posterior displacement of the uterus whenever undue contraction of the abdominal muscles from any cause takes place. These ligaments no doubt become moderators to any excessive muscular action that may interfere with the normal equipoise of the uterine tissue. In case of chronic prolapse the ligaments will often be observed to have undergone much change; they will be found to have lost their contractile power, and will, of course, fail to respond to any stimulus that may be imparted to their tissues. In those cases in which they may respond to the presence of stimulus, they will in great measure prove powerless in preventing the occurrence of prolapse, for their function is rather to preserve the uterus from a backward displacement than to overcome the factors that enter into the causation of its descent. Undoubtedly these ligaments, as they now appear in the human organism, are as yet the beginning, or rather the rudiments of structures, which, under favoring circumstances, during the course of coming ages, could arrive at a high state of development; that their progress toward this consummation has been much retarded by the faulty habits of their possessors there can, in the minds of all thoughtful gynecologists, be but little doubt.

Dr. J. H. Kellogg¹ quotes Dr. Bland Sutton, an English writer who has made special study of the pelvic diseases appearing in the females of the lower animals, as stating that the

round ligaments are present in none of the lower animals, with the exception of the chimpanzee and others of the higher kinds of apes.

An attempt at ventral fixation, with the view of suturing the round ligaments through a central incision of the abdominal wall, may prove ineffectual, especially in a woman of relaxed muscular habit or in one in whom there is in the abdominal parietes an excessive accumulation of fatty tissue. I have spoken thus much on matters relating to certain methods for overcoming prolapsus uteri, and I have referred to their final results. I have discussed, to some extent, the surgical measures undertaken for the restoration of the perinæum. Colpo-perinorrhaphy has been considered, and mention has been made of those cases in which it has been attempted on the anterior and also on the posterior vaginal wall. An early resort to the operation for narrowing the vaginal wall has, with some operators, been attended with favorable results. Much success has been obtained in those cases in which high posterior colporrhaphy and high perinorrhaphy have been undertaken. Though much relief follows in some cases, and most favorable results in others, yet there is a class of cases which rarely improve under such measures of procedure.

Another plan of treatment, therefore, is often imperatively demanded. I have spoken of the unimportance of the uterus after it has been shorn of its adnexa. In that class of cases in which only one ovary has been removed and the menopause has not been reached, other things being equal, the uterus may still carry on

¹ Transactions of the American Association of Obstetricians and Gynecologists, Vol. II, 1889.

its normal functional activity; the marital relation will not essentially be disturbed. In those cases in which both ovaries and tubes have become seriously affected, and in which there has been an intractable prolapse, resort to hysterectomy appears to offer the best chances for permanent success.

Some years since Mr. Keith considered that hysterectomy could be reasonably recommended in many cases other than of a cancerous nature. Later experiences have shown that vaginal hysterectomy is often imperatively demanded for malignant disease, and that it should be resorted to at an early date. The chief danger to be encountered in the operation is that arising from hæmorrhage. By the strict observance, however, of antiseptic precautions, and by the careful suturing of the tissues before excising them, the danger will be reduced to a minimum.

F. A. Purcell, of Manchester, England,¹ informs us that in 1828 Dr. James Blundell was the first in England to perform successfully by vaginal section, total extirpation of the diseased uterus. This subject has, in England, given rise to much discussion. The German surgeons² were the earliest to revive the practice; by careful study, wise discrimination, and by their increasing experience they have achieved excellent results. The records as furnished by the distinguished German operators, including Shroeder, Olshausen, Martin, Hegar, Czerny and Sänger show that vaginal hysterectomy resorted

to even for malignant disease was followed with a mortality of only from 28 to 30 per cent. Other operators have also obtained similar success. Results in favor of vaginal hysterectomy have been far in advance of those by the abdominal method. In an able paper on vaginal hysterectomy with observations on eleven cases of malignant disease contributed by Dr. Charles A. L. Reed,¹ the results shown are still more gratifying. Out of this series of cases of vaginal hysterectomy there occurred only one death. From the discussion which followed the reading of this timely communication it would seem that by the recent advances which have of late been made in surgical attainments, vaginal hysterectomy when resorted to at an early date, if properly performed, is an operation comparatively free from danger.

Goodell² in speaking of vaginal hysterectomy says that the general consent of gynæcologists has fixed upon the vagina as the best channel through which the uterus should be extirpated whether for cancer, for incurable prolapse or for fibroid tumor, provided that the organ at the time is not unduly enlarged. It may further be remarked that in case of prolapsus uteri without the complication of cancer or of fibroid, or other tumor, it would be exceedingly rare to find a uterus so enlarged that it could not after excision be removed through the vagina.

In a paper on the "Treatment of Complete Prolapse of the Uterus," contributed by Dr. J. C. Irish, there is a report of two cases in which ante-

¹ Vaginal Hysterectomy for Malignant Disease. Transactions of the Ninth International Medical Congress, 1887.

² *Op. cit.*

¹ Transactions of The American Association of Obstetricians and Gynæcologists, Vol. III, 1890.

² Medical News, 1891.

rior and posterior colporrhaphy had previously been made according to Hegar's method; in each case the prolapse having returned, vaginal hysterectomy was performed, yielding most satisfactory results.

In the first case, the patient's age was 40 years. She had had two children. Besides making an anterior and posterior colporrhaphy, the elongated cervix was also amputated. In less than a year after the operation, vaginal extirpation was accomplished in the same manner as when resorted to for a carcinomatous uterus.

In the second case, the patient's age was 48 years. A recurrence of the procidentia following Hegar's operation, vaginal hysterectomy had to be called in requisition. The difficult part of the operation in each case was in overcoming the close attachments which in these instances had been very firm and extensive between the uterus and the bladder. The patients rapidly recovered; there was no apparent pressure of the abdominal contents into the vagina.

Dr. Irish makes mention of a case of prolapse, reported by Dr. Krug, in which hysterectomy was made. The operation afforded permanent relief.

At a recent meeting¹ of the Gynecological Society of Boston I had occasion to state that I had in my practice some cases of intractable prolapsus uteri, in which I was compelled to resort to vaginal hysterectomy. In each case the results of the operation were successful. My own experience in these and in other cases leads me to say that the operation is not a difficult one; that it does not expose the patient to so many

dangers as are incident for the most part to other methods of procedure, especially to those of abdominal section. A resort to hysterectomy effects a permanent cure.

The first case was that of Mrs. E., aged 48 years; she was a multipara and had suffered from the displacement for several years. There had been a partial laceration of the perinæum, but perinorrhaphy had been resorted to. Anterior and also posterior colporrhaphy had been performed; for some months afterward she experienced much relief. After the lapse of sixteen months the prolapse returned; the vaginal tissue was much relaxed and the other structures in the immediate vicinity were unusually distensible. The patient was stout; she had an abnormally large and broad pelvis. There was but little posterior displacement. The case was evidently one of complete descent of the uterine tissue. The indications were that any attempt at shortening the round ligaments would fail to afford permanent relief.

The patient in the second case was aged 44 years. She had a broad pelvis; she was also quite stout and of lax habit. She had given birth to six children; all her labors had been rapid. The perinæum during the third labor was ruptured, but an operation for its restoration was attended with good results. An operation for shortening the round ligaments had been attempted. Other surgical measures had also been proposed, but were declined because the patient could not reasonably be assured that permanent relief would follow.

In another case in which anterior and posterior colporrhaphy was tried,

¹ December 8, 1892.

the patient for some two years experienced marked relief. After sustaining, however, a severe strain the former symptoms began to return, and not long afterward the prolapse was as marked as before. Vaginal hysterectomy was proposed and was accepted. The operation was effected

with but little loss of blood; no untoward symptoms followed.

The record of these cases illustrates, to some extent, for intractable prolapse the advantages of vaginal hysterectomy over the other methods of surgical treatment which have been more commonly adopted.

Contraction of the Cervix Uteri Upon the Neck of the Fœtus, a Source of Danger to the Latter, and a Frequent Cause of the Prolongation of the Second Stage of Labor.

BY CHARLES W. ROOK, M.D.,
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THE history of a few cases will best illustrate the purposes of my paper.

CASE I.—November 1, 1885, Mrs. M.W. was confined. The first stage of labor was normal, the liquor amnii escaping freely as the occiput passed the os uteri. Half an hour later there was, notwithstanding, the occurrence of strong and frequent expulsive efforts, no apparent advancement of the occiput. A careful examination revealed a peculiar action of the uterus, the explanation of which we learned later. During the acme of an expulsive effort, it was observed that the occiput was sufficiently elevated or retracted to permit the free passage of the examining fingers between the occiput and perinæum. The vigor of the foetal movements having markedly decreased, it was thought best to hasten the delivery. The forceps was applied, and firm traction employed without in any way advancing the occiput.

On the removal of the forceps, the examining hand was carried by the head to the neck of the fœtus, which was found so closely encircled by the rigidly contracted os as to prevent the further introduction of even one finger. Profound anæsthesia was now induced, the forceps reapplied, and firm traction employed, which caused the rigid os to relax, and permit the passage of the shoulders, and the completion of labor. Several minutes were employed in resuscitating the infant, the tissues of whose head and neck, down to where the latter was encircled by the os, were very darkly congested.

CASE II.—February 22, 1886, Mrs. V. was confined. She was in the care of Dr. E., who called me to aid in the delivery. The left foot lay in the vagina, with the fœtus in the left sacro-anterior position. The liquor amnii having drained away, the right foot was brought down by its fellow,

and the body and arms delivered with but little difficulty; but the os uteri closed upon the foetal neck, thus greatly endangering the life of the foetus. After much perseverance the forceps was applied and the head delivered. Though much congested the infant quickly revived.

CASE III.—August 19, 1888, Mrs. A. P. was confined. She was in the care of midwife Mrs. B., who informed me that “the os had been fully dilated for three hours, and ergot freely administered, and that there was no appreciable movement downward of the vertex.” Patient was anæsthetized, and the rigidly contracted os uteri found closely encircling the foetal neck, with the head in the left occipito-anterior position. The forceps was applied, and delivery promptly effected, though all efforts failed to resuscitate the infant.

The deeply corrugated and congested tissues of the head indicated that death was due to prolonged cervical constriction.

CASE IV.—December 5, 1889, Mrs. J. M. was confined at full time of a macerating foetus of about eight months' development. She was in the care of midwife Mrs. H., who reported that “patient had been in labor for two days, and that even ergot had failed to produce pains strong enough to expel the foetus.” The perinæum was absent, not having been restored from a severe laceration received at a former labor.

The vagina was occupied by the greatly elongated cervix uteri, which would, during the acme of an expulsive effort, extend three inches beyond the ostium vaginae. The os uteri was sufficiently patulous to admit the introduction of the examining

finger, which found the amniotic sac ruptured, and the head at the lower strait of the pelvis. After inducing anæsthesia, the cervix uteri was digitally dilated, so that the forceps could be applied, then working in conjunction with the expulsive efforts, the head was soon brought outside the vulva, but remained covered by the previously elongated now distended cervix. The os uteri, where it encircled the shafts of the forceps blades, was one and a half inches in diameter. As the foetal head had passed the ostium vaginae, though still enveloped by the distended cervix, the latter's subsequent action, until the completion of labor, was under visual inspection. The commencement of an expulsive effort would be announced by a slight contraction of the os which would relax by the time the fundus became contracted.

The expulsive efforts being insufficient to rapidly dilate the os, the latter was dilated with the fingers to such an extent as to permit the passage of the biparietal diameter. The os adapting itself to the contour of the lower portion of the head, gradually and firmly closed upon the neck of the foetus. After some minutes' delay, during which the rhythmic contractions of uterus began and ended as stated above, the os was a second time dilated for the passage of the shoulders, after which it closely followed the contour of the escaping body and extremities, and closed upon the funis, necessitating a third dilatation for the removal of the placenta.

These cases have been selected as typical illustrations of the conditions under consideration.

Although occasionally the cause of the death of a foetus, and often the

cause of prolonged maternal suffering, this contraction of the os uteri upon the neck of the fœtus is, under conditions frequently obtaining, physiological and not pathological. If the amniotic sac ruptures at or before the completion of the first stage of labor, and the presenting part fits not the parturient canal with an almost valve-like nicety, there will escape an excess of the liquor amnii, thus diminishing the volume of fluid that should surround the fœtus, from the biparietal diameter of the head to that of the bisacromial, and prevent the elastic tube-like contraction of the os upon the fœtal neck. It is as physiological for the os to close upon the neck of the fœtus, after passing the biparietal diameter, unless prevented by the volume of liquor amnii surrounding the fœtal neck, as it is to contract upon the funis after the escape of the fœtus. It is as physiological for the circular fibres of the cervix uteri to cause the latter to adapt itself to the contour of the fœtus, unless prevented by the liquor amnii, as it is for the circular fibres of the intestine to adapt themselves to its contents. Being of the same variety of muscle fibre as the intestine, and deriving its nerve supply from the same source—the sympathetic—there is, therefore, no essential difference between the rhythmic peristaltic movements of the uterus and intestine.

The following quotation¹ touches the subject under consideration. Lusk says: "The normal dilation of the cervix is, however, by no means a matter of pure mechanical distention. If the canal which forms the communication between the vagina and the

uterus were simply an elastic tube, it would of necessity retract down upon the neck of the fœtus after the passage of the head, and thus a new distension would be required to permit the passage of the shoulders. Indeed, the conditions of an elastic tube are not unfrequently realized in versions, where an attempt is made to extract the fœtus through an imperfectly dilated os; in which case, after the disengagement of the shoulders, the cervix is apt to close upon the neck, and arrest the delivery of the after-coming head.

That this complication does not happen, as a rule, is due to the fact that in natural labors the mechanical expansion is associated with certain organic changes which render the cervix soft and distensible, and at the same time diminishes its retractility."

Notwithstanding the above quotation, the writer holds that the cervix uteri partakes very largely of the attributes of an elastic tube, and that those attributes will be manifested more or less markedly upon every occasion when the condition before referred to obtains. Professor Lusk admits the frequency of this elastic tube-like contraction of the cervix in the case of versions, but does not, I think, present the true reason for its occurrence. After the shoulders pass the os uteri and before the biparietal diameter can engage in the same, the volume of fluid surrounding the fœtal neck escapes, thus permitting the cervix to contract more or less firmly upon the after-coming head. We further hold that in normal labor there occurs in the distension of the cervix uteri no more organic change than occurs in the distension of the

¹ Lusk's Science and Art of Midwifery, Edition of 1882, p. 137.

sphincter ani in defecation, the acme of intestinal peristalsis as labor is the acme of uterine peristalsis.

Recognizing not only the possibility, but also, the probability of the cervix uteri contracting upon the

neck of the fœtus during the second stage of labor, it will enable us, by prompt instrumental interference, to prevent much maternal suffering and occasionally preserve the life of a fœtus.

Four Women who Refused Oöphorectomy, and Their Subsequent Histories.¹

BY H. McHATTON, M.D.,

MACON, GA

CASE I.—Widow, 35 years of age, mother of three children, has been under my care for the past seven years. Has an anteversion and painful menstruation; uterine condition normal in other respects; during my time of attention she has never been in bed a day on account of her menses. Has all the care of her family, which she has supported for years, which has involved a great deal of labor and mental solicitude. About eighteen months ago she was advised to have oöphorectomy done as the only means to make her future bearable. The operation being insisted upon, she absolutely refused; she has had no professional treatment since and tells me to-day that she is perfectly well, which assertion is fully sustained by her mental and physical condition, as well as by the amount of work that she is doing.

CASE II.—Married two years, age 22. One child nearly a year old. Gives a history of painful menstua-

tion with the usual train of nervous and hysterical symptoms, previous to her pregnancy. Just before her marriage, after due consultation oöphorectomy was advised, insisted upon, and refused. She is to-day the picture of a healthy young matron, and assures me that she is not even aware of the existence of her womb. I have never examined this case.

CASE III.—Married, 31 years of age, mother of two children. Was one of the worst cases of dysmenorrhœa that I ever saw. In bed about ten days of each month. All varieties of hysterical symptoms, pronounced hystero-epilepsy, nervous tone never being regained during intra-menstrual period, decided mental disturbances at all times. After being under treatment of gynecologists for years, with negative results, oöphorectomy was advised, with the absolute alternative of death or the asylum. Marriage occurred soon afterward. The woman is to-day, with the exception of an anteversion, perfectly well as far as her uterine

¹ Read before the Georgia State Medical Association, April 19, 1893.

condition goes, has a normal menstruation, no mental trouble, and is well-known in the South as a leader of society and a woman of brains.

CASE IV.—Has been reported by Dr. Lusk as follows: "The patient, when I first saw her a year ago, was a young woman of 17. She had been suffering agonizing pains at monthly intervals, and was confined to the bed or couch for the greater part of the time. An examination revealed occlusion of the lower vagina. An opening was made, and a large amount of retained blood and clots was removed from the upper vagina and uterus. The latter had been converted into a sac. For a long time thereafter the tubes remained thick and tender. This was especially marked on the left side, to which the fundus of the uterus was drawn by peritoneal adhesions. Salpingotomy was plainly indicated, and I should have performed that operation had I obtained the patient's consent. Finally, however, she married. My advice in the matter was not asked." Last June the young woman called upon me. She had been married a year, and was seven months pregnant. The thing was inconceivable, but it was a fact. I will simply add that labor was normal, and that this woman is to-day as perfect a specimen of physical health as I know.

The above in a brief *resumé* of the histories of the only four women that I have ever known that refused this operation. The time that has elapsed since it was advised varies from eighteen months to twelve years. I do not go into the details of the cases, as the only point I wish to make is that in each case the operation was advised and urged by gynecologists of

standing, both North and South, consequently they must have been convinced that these were cases demanding operative interference. Please compare the results obtained without operation with the results that would have followed the best operative success. Think at what cost Cases II, III and IV would have figured as successful cases in the statistics of the gentlemen that wished to perform the operations, a possible sacrifice of marriage, and an absolute sacrifice of that greatest boon of all women, maternity. Cases III and IV I have known most intimately since girlhood, and no language of mine can express the difference between what is and what might have been, in these two cases.

In a practice of average size for twelve years, I have had occasion to recommend the removal of the appendages but once, excepting cases of ovarian tumor. That one proved to be a case of pyosalpinx. Several of my patients have drifted into other hands and had oöphorectomy performed, and as far as I can learn, have been disappointed in the results each time. The best men in this special line of work are doing this operation less and less each year. Their place is being amply filled by lesser lights, with smaller numbers of individual cases, but with a yearly aggregate that is terrible to contemplate. By what combination of circumstances could one man, to fame unknown, in a small interior city, and in a short space of time, find 144 cases demanding abdominal section?

I will acknowledge that nearly all operators at present only operate for some pathological condition of the ovaries or tubes, in their conception. But

one of our best pathologists does not agree with them, and he had unusual opportunities of examining bottled ovaries.

Any one desiring to follow up the line of thought suggested in these cases will be interested in the following articles: "The Remote Results of the Removal of the Ovaries and Tubes," W. T. Lusk, "American Journal Obstetrics and Diseases of

Women and Children," Vol. xxiv, No. 11. "The Abuse of Oöphorectomy in Diseases of the Nervous System," Allen McLain Hamilton, "New York Medical Journal," February 18, 1893. "Abdominal Surgery and its Evolutions and Involution," Joseph Eastman, "Journal American Medical Association," March 11, 1893.

Drainage of Ovarian Cysts Where the Adhesions are Such that it is Impossible to Remove the Sac by Cœliotomy.¹

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IN the diagnosis and treatment of ovarian cysts it is, I think, admitted by all that little more can be said in that direction than has already been accomplished. Without fear of contradiction, it may be asserted that each operator has his particular technique that he follows with conscientious care. There may be some slight deviation in the method of emptying the sac, in applying the ligatures, or the use of the cautery to the pedicle and in closing the abdominal incision. This paper is not intended to touch upon such points, but now and then we meet with a case presenting such strong adhesion of the sac to the various organs, that the question is at times forcibly impressed upon us, how

far shall we go in making a prolonged operation without immediately resulting in such marked shock as to complicate seriously the patient's living many hours, or a death resulting? the latter being always detrimental to our would-be-successful operations in that particular neighborhood where the patient resides. The pathological conditions and changes, the symptoms that are associated with the formation of adhesions, in the development of a case of ovarian cyst are, I am quite certain, at times passed over too lightly; that is, the patient not infrequently does not lay sufficient stress upon the history of her case when detailing it to the family physician or to the surgeon who is about to operate.

Localized pains are not sufficiently emphasized, slight accidents are for-

¹ Read before the Section of Gynecology and Abdominal Surgery, Pan-American Medical Congress, Washington, D. C., September, 7, 1893.

gotten, and adhesions have resulted, very often out of proportion to what seemed trivial causes and conditions.

Again, on the other hand, patients are not infrequently subjected to too many examinations, this being, quite often, the fault of herself or friends. They are desirous of seeing too many physicians, and an undue and severe handling of the case may bring about localized peritonitis, resulting seriously when the time comes for operation. There is often an additional and unnecessary nerve strain given to many patients by too frequent and too severe methods employed in the examination of cases of suspected abdominal tumors. Members of our profession have learned fully the danger that results from the use of the aspirator and trocar, and in that direction patients have been relieved from the employment of measures that afterwards so frequently produce adhesions externally, as well as suppuration within the sac.

Then, again, cases may be examined with ever so much care; we learn all that is possible of the previous history, as to traumatisms that may have occurred, with or without marked evidence of local pain and peritonitis having supervened, and yet serious adhesions may be present. Some women will tolerate much more readily than others the pains that result in peritoneal adhesions. We know that no two cases go on precisely alike. The rapidity with which adhesions will sometimes form in one case, and the extent of their development is out of proportion to some other cases where the etiological factors have been equally as great. Very properly an operator of experience, at the present time, does not

subject his patient to too long and too nerve-depressing examinations. I take it, the experienced operator of to-day has not, by any means, given up the term exploratory incision in such cases as present with an indefinite history, yet adhesions suspected, though the incomplete operation grows less and less as the number of his cases increase, and he becomes more familiar with the operative procedure pertaining to the removal of tumors with many complications. To reach our subject a little more closely, we have made our diagnosis in many cases, and are satisfied that adhesions are present, probably of that variety too strong to yield to the pressure of the sponge or careful use of the hand, that many ligatures will be required, and that possibly adjacent organs may be implicated to the extent that will make the operation exceedingly tedious and dangerous. An exploratory incision is decided upon, and which, not infrequently, confirms our suspicions as to the grade and extent of these adhesions; the patient somewhat, and the friends in particular, are prepared for a severe and tedious operation, the judgment of the operator alone being relied upon to bring the case through successfully. I have not infrequently asked myself the question, when having to deal with such cases, and the patient has been subjected to an operation of an hour, one hour and one-half to two hours, nearly dying, or, perhaps, doing so within twenty-four or thirty-six hours, from the shock resulting from so prolonged an operation, would it not have been better to have shortened the time in some way, leaving portions of the sac, or the cavity formed from the adhesions, to be

drained, and thus not carrying our patient to near the condition of exhaustion that results in immediate death? Will not drainage save more patients and bring our cases into a far more comfortable atmosphere of treatment, a larger percentage to go on to permanent recovery, although somewhat tedious, yet not producing that shock and depression upon the friends and neighbors as death upon the table or a few hours afterward?

Take the following case as one for illustration, although not an ovarian cyst, yet having the form of adhesions to large intestines that I wish more particularly to emphasize in this paper:

CASE I.—Miss McD., aged 40, unmarried, housewife by occupation, entered St. Peter's Hospital May 11, 1887, giving the following history: I had her under observation for nearly ten years, during which time she had enjoyed very good health, with the exception of an enlargement of the lower portion of the abdomen, on the left side. When first noticed it was about the size of a small lemon. This increased very gradually without giving her very much pain at any time. Up to two years ago she had suffered no serious inconvenience, and at that time I urged her to have an operation. The clinical history, direct physical examination, symptoms, all indicated it to be a case of sub-peritoneal fibroid, with probable attachment to the left side of the uterus. She had, however, always objected to an operation. During the past two years she has suffered very much more pain, and the tumor has increased somewhat rapidly, now, at the present time, filling the entire abdomen, pressing up against the

diaphragm, pushing the intestines and contents of the abdominal cavity back into the lumbar regions and behind the liver and above the spleen. One year ago she was quite ill with an attack of localized peritonitis. She is now desirous of having an operation, knowing that the obstruction to the bowels, the pressure upon her stomach, depriving her of food, all of her discomforts convincing her and her friends that in her present condition she cannot survive long.

Operation May 12, 1887. The tumor was exposed and a distinct pedicle found connected with the left cornu of the uterus, capable of being ligated, but extensive adhesions were discovered connected with the omentum, firmly attached to the ascending, transverse and a portion of the descending colon. The tumor was found undergoing cystic degeneration, the loosening of the adhesions became very tedious, it took a long time to free them from their attachment to the tumor, and, in fact, in some places the walls of the tumor were dissected off, hæmorrhage controlled, the surfaces of the portion of the sac brought together, leaving a mesenteric attachment with the intestine. Glass drainage tube, with gauze packing, employed. No hæmorrhage indicated, and but a moderate amount of serum drained.

Operation occupied one and one-half hours. Patient recovered fairly well from the effects of the anæsthetic, ether being given, became thoroughly conscious, but died from absolute exhaustion at the end of thirty-six hours.

In the light of experience gathered from other cases since, I realize I could have shortened this operation,

bringing a portion of the cyst wall, with the adhesions, into the wound, stitching them there and draining. I know of no other abdominal work that presents with it so great anxiety as the loosening and breaking up of these strong adhesions, particularly when any portion of the intestinal tract is implicated.

Resecting portions of the small intestines becomes possible, yet great care must be exercised here in seeing that the mesenteric attachments are preserved. But when large intestines are involved resection or anastomosis becomes very much more serious. Adhesions to the solid structures situated in the abdominal cavity give us sufficient anxiety without doubt, but can be managed much more successfully than when we encroach upon the calibre or any portion of the intestines.

It is fortunate for the operator that these cases are not many in number; it is fortunate for us that they are growing less; yet, now and then, as I have stated, for some unexplained reason, adhesions form very quickly, much more so in some cases than in others. Some patients have a pain, not particularly distressing to them, not putting them to bed altogether, but it is the pain nevertheless of adhesive peritonitis, and we find cases where the clinical history is out of all proportion to the serious adhesions that present. Neglected cases of ovarian cyst will yet present occasionally, and the question seems so pertinent to us, as operators, How far shall we prolong the operation; to what length shall we carry it? Must we not exercise the greatest care in taking into consideration the strength of our patient, and is it not

better to cut short an operation, and, if possible, drain a portion of the cyst wall, with adhesions, than to pass too many anxious hours in carrying our patient out from the condition of exhaustion, or sadder still, to friends of the patient and interest of operative surgery, witness a death from our overwork in attempting what is really too much for the patient to bear?

Although this procedure of drainage is a somewhat tedious one, yet I feel to emphasize that it carries our patient out from the domain of immediate death, and thus does not bring to the friends and relatives that depressed condition of the mind, that aversion they ever afterward have to any form of surgical interference.

Dr. John Homans, as well as many other able operators, has given us a record of cases in which it was found necessary to stitch the sac (owing to the severe adhesions) into the abdominal wound and drain. Can we, however, say or admit that our textbooks have placed sufficient importance upon this line of procedure?

I cannot just now give the relative percentage between my cases of drainage and completed operations, but will be able to do so very soon in another paper, yet to illustrate somewhat more fully my present subject I desire to speak of the following cases somewhat briefly:

CASE II.—Mrs. O. F., aged 40 years, married, housewife by occupation, mother of two children. Presented a very good record of health. Entered the Albany Hospital October 6, 1887, having been seen only recently by Dr. Robert Selden, of Catskill, N. Y., and who advised an immediate operation.

Records of the hospital state that

four years previous she first noticed a tumor located on left side, and supposed to be about the size of a child's head. It grew slowly until June, 1887, and has since then increased very rapidly. Patient has lost much in flesh and strength, bladder irritable, abdomen much distended, tumor fluctuating, and a hard body is felt over the surface of the vaginal vault. Patient has never been tapped. Has received several traumatisms and suffered much localized peritonitis. Abdominal incision was made and thirteen pints of very offensive liquid pus removed. The cyst wall was so adherent to the viscera removal of the sac became impossible, and it was found necessary to stitch the opening in the sac into the abdominal wound by continuous suturing, yet even in doing this it was impossible to hold the sac, it was so friable and rotten that at the point of union, where the drainage tube was introduced, the cyst wall was lost sight of. Drainage was attempted, but was not so thoroughly successful as could be wished. Owing to some family distress she was obliged to return home the next day. The wound soon closed after that, and on November 9 her physician realizing that the sac was filling, aspirated, removing a pint of liquid pus. Between that time and January 23, 1888, she was tapped twice, twenty pints of pus being removed in all. She was urged to have permanent drainage established, and the remaining portion of the cyst washed out, but she was so unfortunately situated that it was impossible to carry out the suggestion. She was aspirated again, but ultimately died from an attack of pneumonia.

This case, could she have had proper

nursing and thorough drainage kept up, I have no doubt would have made a permanent recovery. I feel quite certain that had we persevered in attempting to remove the adherent cyst she would have died early from shock.

CASE III.—Mrs. C. H., aged 55, married, native of Germany; housewife; residence, Adams, Mass. Patient well as a girl; first menstruated at 19; always healthy; has had ten children; present trouble began seven years ago—at that time the menopause occurred. About three years ago she began to increase, most noticeably about the waist: last summer she experienced pain in the abdomen for first time; appetite good, bowels regular; admitted to Albany Hospital, December 8, 1889. After careful examination diagnosis made of ovarian cyst with probable adhesions due to the local peritonitis she had evidently had. Operation was decided upon and incision made December 9, in the usual manner, but the cyst was found thoroughly adherent to the parietal peritoneum and to the omentum, and large intestines to that extent that it was impossible to remove it. The cyst was stitched into the abdominal wall by continuous sutures, patient making a good recovery; after continuous drainage for about ten weeks, the sinus remained permanently closed, and she recovered her health sufficiently to return to her household duties. This patient remained well up to January, 1893, when she again began to enlarge, and now presents with a cyst about one-half the size of the former one. I am of the impression that the other ovary has taken on a development of cystic tumor, and that we

have here an embarrassing situation, as to whether it will be possible to remove it, even if it possesses no adhesions of its own.

CASE IV — Presents a condition bearing more particularly upon this paper, that of Mrs. J. McD., married, mother of several children; a patient of Dr. H. E. Mereness, of Albany, and who gave a history of abdominal tumor of more than three years' growth. She was a very fleshy woman, and it was very difficult to make out the diagnosis, yet from the history it was believed she was suffering from either a fibro-cystic, or a multilocular ovarian tumor. Owing to pressure against the diaphragm, owing to obstruction of the bowels, and œdema of the lower extremities, it was decided to operate. January 10, 1892, the operation was done; we found a thick cyst wall with three large cavities, containing a brownish-looking fluid, thick in character, like that which we not infrequently get from multilocular ovarian cysts, and on breaking down the partitions I was able to evacuate the contents, so as to bring the abdomen down to about its normal size, but I found the most extensive and serious adhesions possible. The large intestines were severely implicated, as were also portions of the abdominal parietes, and when drawn upon dented the external appearance of the abdominal wall. With my hand I cleaned out the contents of the cysts as thoroughly as possible, breaking down partitions, brought the edges of the cyst well up into the abdominal wound, stitched with continuous suture, placed in two glass drainage tubes, washed out thoroughly with a solution of mercuric bi-chloride at times, occasionally using carbolie acid, but mostly

a solution of boric acid, continued drainage, and in good season had the satisfaction of seeing this patient make a complete recovery, although she was under the careful treatment of Dr. Mereness and myself for a period of between three or four months. She is now well, and in every way able to attend to her household duties.

I am certain that had we gone on and prolonged the operation that this patient would have been placed in serious jeopardy as to her recovery, and I feel that it would have really been impossible to have detached the adhesions.

CASE V.—Mrs. N. O., aged 62, housewife by occupation, under the care of Dr. Barry, of Schenectady. Admitted to Albany Hospital November 11, 1892. Married, mother of four children; menopause at fifty. No unusual personal or family history. Says she did not notice any enlargement of the abdomen until one year ago, when she began to increase quite rapidly; has not suffered any particular pain, appetite very good; some bladder irritation, but the bowels have behaved well. For the past two or three years she has frequently been joked by her friends as to her growing fleshy. Examination of the urine shows the kidneys to be in a healthy condition. No swelling or œdema of lower extremities. Pulse about 80, but slight rise in temperature. Operation November 12, 1892, believing the case to be one of multilocular ovarian cyst. On entering the sac I drew off nearly three quarts of purulent-looking fluid. There were no pelvic adhesions and I had no difficulty in reaching a fairly good pedicle, associated with the left ovary, but in pass-

ing my hand up along the cyst wall on each side, and attempting to reach to the superior surfaces of the cyst, I found the adhesions so serious, and so firmly attached to the transverse colon, as to make it soon evident it would be impossible to loosen them with any degree of safety. I therefore emptied the cyst walls thoroughly well, it really being a multilocular cyst, closed the openings in the sac, reached the pedicle, ligated it in two places, made a section between the double ligatures, drew the lower portion of the cyst wall well up into the incision, stitched carefully to the abdominal wound, reopened what was left of the cyst, cleaned out thoroughly, placed a glass drainage tube down in the cavity of the pelvis (it draining quite successfully for three or four days, and was then removed), also placed two glass drainage tubes, packing well around them with iodoform gauze in the remaining portion of the cyst wall, and then continued thorough drainage afterward. This patient made a good recovery and is now able to get out and about, enjoying life with much comfort—a great joy to her anxious children.

CASE VI.—Mrs. C. M., aged 37, married, housewife by occupation, came under my observation April 20, 1893, with the following history: Sister died of phthisis at the age of 30, otherwise family history good. Patient never strong; has had six children, no miscarriages; always regular in menstruating. Seventeen months ago had pleurisy, with effusion of the left side; was aspirated by Dr. Macdonald, of Schenectady, and, as she said, a large amount of fluid removed. From this she made a good recovery, but about this time she noticed an

enlargement of the abdomen. In February, 1893, the abdomen was aspirated and about three quarts of fluid removed. Examination reveals a well-defined tumor in the right side of the abdomen and extending up above the umbilicus, fluctuates somewhat distinctly, but gives a sensation of being held firmly in position. Diagnosis was made of tubercular peritonitis, with fluid, probably held in pockets by adhesions, between folds of intestines. Since her last aspiration she has gradually failed and has lost in strength until now her general health is somewhat seriously affected. Exploratory incision advised, to be followed by permanent drainage. Section made on May 3, 1893. Quite an amount of ascetic fluid was removed, and then an ovarian cyst, connected with the right ovary, holding nearly a quart of fluid, was discovered. Here the adhesions to the cæcum and the sheath of the iliac vessels on the right side were so firm with adhesions to the transverse colon and stomach, which were brought down below the umbilicus, that I could do but one thing, and that was to bring the cyst walls up into the incision, stitch and drain. Drainage was carried out successfully, and the patient made a good recovery.

CASE VII.—Mrs. L. Y., aged 50, housewife, referred to me by Dr. Moon, of East Springfield, N. Y. Family history exceedingly good: thorough absence of any malignancy or tubercular disease; both father and mother still living, and in fairly good health. First menstruated at 11, and has always been regular. Married at the age of 24; never pregnant. Ceased to menstruate at the age of 40. When 18 years of age was thrown from a horse, and thinks she was

never quite as well afterward. Had scarlet fever when 23 years of age. Fifteen years ago she suffered some pelvic distress, and consulted Dr. Thomas A. Emmett, of New York City, who gave her the diagnosis of fibroid tumor of the uterus, and advised her to let it alone. Eight years ago was thrown from a wagon, striking upon her buttocks, and receiving a severe jar. Was weak for a long time afterward, feeling much soreness in what she supposed to be the fibroid; however, remained in very good health up to December, 1892, when she noticed an enlargement of the abdomen low down and on the left side. March, 1893, this had increased very decidedly. About the 1st of June she had very severe attacks of pain for three days and nights, suffering a great deal, and has since had several such attacks, but thinks they have gradually decreased in severity. She says the growth has enlarged very slowly since she first discovered it. Has suffered much inconvenience from constipation, more, especially, since noticing this last enlargement. I saw her August 1, 1893; was able to locate a fibroid tumor on the right side of the pelvis, low down, and about the size of a goose egg; the uterus was drawn up to the left, the broad ligament of that side seemed contracted, and the uterus fixed at that point. Above the symphysis, and extending close up to the typhoid cartilage, filling the lumbar regions thoroughly, could be made out a fluctuating tumor, evidently ovarian in character. I advised an immediate operation in view of her general emaciation, her inability to take much food, pressure upon the kidneys and other important organs, being such

as to give her great inconvenience and distress. She had remembered thoroughly well Dr. Emmett's advice, and was reluctant to have any operative interference, but when the case was fully explained, she seemed more willing. She was detained in various ways, and did not enter the Albany Hospital until August 29, 1893. After proper preparation operation was performed the next day, the 30th. I had anticipated meeting with adhesions, her history being in that direction. Had no trouble in exposing the sac and emptying the contents, a brownish-looking fluid, but found as I withdrew about two-thirds of the sac that it was firmly adherent to the rectum, including sigmoid flexure, dipping down into the pelvis on the left side and also adherent to the sub-peritoneal fibroid, which had its relation in connection with the right cornu of the uterus. After thorough examination I found that it would be more than dangerous to attempt to dissect the sac, which was held so firmly by strong adhesions. I, therefore, stitched the deeper portions of the sac to the abdominal incision, removed that portion which was free, emptied the remaining part thoroughly, being in size not more than would hold a pint, placed in gauze drainage, also a glass drainage tube to the deepest portion—operation not being a prolonged one. Patient has gone on uninterruptedly with a train of satisfactory symptoms, doing as well as could be desired.

I am fully aware that every operator must, at the time of operating, be the judge as to how far he may go in the removal of tumors associated with strong adhesions. In view of the

very excellent system of drainage that can now be employed, in view of the impression that prevails among the friends of the patients that they ought not to die upon the table, or from the immediate effect of shock, only in very rare instances, I am prone to believe that we should be somewhat conservative in our course in these cases, yet I am frank to admit that it is much more pleasing to the operator, much more a test of surgical skill, perhaps, to remove all that which he has attacked as a pathological condition, and bring his patient into as normal a state as possible. In carrying out drainage in these cases the patient should be put in care only of a conscientious, judicious nurse. A glass drainage tube should be employed and made to reach to the deeper portion of the cyst, and whatever remains of the cyst walls and adhesions. A rubber drainage tube cannot be relied upon at first. Gauze packing is much preferable to the latter. We are bound to respect pelvic adhesions when then they implicate the sheath of important vessels resting there, and gauze drainage is the safest. Deep-seated pelvic hæmorrhage is not always so easily controlled, and has troubled more than the operator when he has encountered it. No one will deny but that abdominal incisions can certainly be treated with a greater degree of comfort than where the large intestines are implicated.

We have seen much in days gone

by as to the use of the thermo-cautery and preparations of iron in controlling hæmorrhage, resulting from the breaking up of adhesions, and yet I would like to get the honest expression from the operators of to-day as to how often these two agents are made use of. Ligatures and drainage tube, in one form or another beyond a doubt, are the best agents we have for controlling hæmorrhage in these cases where we are obliged to separate extensive adhesions. I am not unmindful of sapræmia and septic conditions in cases of incomplete removal of the sac, and I do not want to convey the impression that I would in the least surrender any case that it is possible to make a complete operation in. I am fully aware that drainage carries with it some uncertainty, especially in the effort to get consolidation by collapse of the walls on the sac, and where the detritis is to be removed in larger portions from time to time. I would advocate this line of treatment only in such desperate cases as where we feel our patient is likely to be carried beyond the point of possible recovery, and to die by shock, because of the too severe tax made upon the weakened vitality of the system. These cases of drainage require the utmost care and watching as to general treatment; diet, sanitary surroundings all become of the greatest importance where the necessity of drainage is the only method of procedure.

The Relations of Operative Gynæcology to Insanity.¹

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AFTER stating that the ideal aim of the progressive alienist should be the solution of the great problem of the physical foundation of insanity, the essayist quoted from Dr. Maudsley: "We recognize how entirely the integrity of the mental functions depends upon the bodily organization, and as physicians we cannot afford to lose sight of the physical aspects of mental states if we would truly comprehend the nature of mental disease. We recognize the existence of an intelligent mental force, linked in harmonious association and essential relations with other forces, but leading and constraining them and led and constrained by them in its manifestations." Dr. Spitzka has stated that "Disordered states of the pelvic organs have been supposed to play an important part in the causation of insanity. It is known, however, that the grossest lesions of the uterine region are not usually complicated by such mental disturbance as justifies calling it alienation. Those pretty cases in which a delusional insanity is instantaneously cured by restoring a retroflected or retroverted uterus to a normal position, do not seem to occur nowadays, and the gynæcological epoch of psychiatry seems to have passed by, taking its adieu with the sacrifice at Blackwell's Island Asylum of Mary Ann Mullen, a sufferer from unrecog-

nized katatonia on the altar of oöphorectomy. It would have been as reasonable to extirpate the bed sore of a sufferer from parietic dementia, or cut off the hæmatomatous ear of a terminal dement, with the hope of curing his insanity thereby."

Dr. Richard Dewey says: "The continuous and very considerable increase of insanity throughout our country, and the somewhat discouraging results of treatment, have led to dissatisfaction and to seeking after new ideas and methods, and this tendency has been further stimulated of late by the great advance in neurology, neuropathology, psychopathology and operative cerebral surgery. This general recognition of the defects of present methods, and search for newer and better ones, has, like all things human, its good and evil side. It is, undoubtedly, a good thing in itself, but there has been a disposition on the part of more recent converts to an interest in nervous and cerebral diseases to discard all past and present ideas as antiquated and insufficient, and to form extravagant expectations of results from newer appliances, while, at the same time, those already occupying the field have been, perhaps, too little aware of the possibilities brought within reach by the discoveries of recent years. These facts are illustrated by the abortive movement inaugurated a short time ago in London to establish an asylum for the

¹ Abstract of a paper read before the American Medical Association, Milwaukee.

insane, to be solely managed by a visiting staff of specialists in various branches, with not a man among them connected with any institution for the insane, or possessing a practical knowledge of the care and management of the insane, and there are numerous illustrations of the same kind in our own country. The men engaged in private practice in the specialties of brain and nervous diseases on the one hand, and the men in charge of institutions for the insane on the other, have, in times past, affiliated to only the slightest degree, and have misunderstood each other. And furthermore, the former have furnished most striking illustrations of their practical ignorance of insanity and its management, marked by calamitous results among their patients, while the latter have been found wanting in the scientific spirit and have too often been absorbed in purely administrative matters, while the rich opportunities for pathological study and for original research have failed to be improved."

L'uterus c'est la femme is a proverb which has received a new development in these days; for if, by courtesy rather than by conviction, women be granted the possession of a few subsidiary organs, these, at best, have no prerogative nor any order of their own. The uterus has its maladies of local causation, of nervous and of mixed causation, as other organs have; but to assume that all uterine neuroses, or even all general neuroses in women, are due to changes in the uterus is as dull as to suppose that the stomach can never be the seat of pain except it be the seat of some local affection. While pelvic and abdominal diseases of women are more

frequently and intelligently recognized by the profession now than formerly, it may be affirmed that more women, ten to one, have been consigned to hospitals for the insane (victims of needless or unskillful surgical operations) than have ever been restored to reason by the most commendable and skillful abdominal surgery. The essayist did not deny that insane women are capable of suffering from local disorders, and that surgery offers no hope of amelioration to these unfortunate women. In some cases anæsthesia may exist, masking conditions so that no suspicion of their nature is entertained; in other cases hyperæsthesia makes the most trifling ailments appear as serious, while no doubt there is a large number of mentally sick women who suffer, and are conscious that they suffer, from some local disorder, manifested to them in the form of pain or irritation.

Hysterical mania is not an uncommon complication of the diseases of women. Two months ago such a case came under my observation, with the following history: Mrs. H., aged 30, admitted to hospital February 7, 1893, married four years, three children, no history of insanity in family. Birth of first child produced laceration of third degree. Perineorrhaphy performed two months after delivery, leaving the patient in a weakened and nervous condition. Whitehead's operation, to which she submitted under protest, was then performed. Within two months she became so insane that a verdict was easily obtained. My diagnosis could be easily made as a case of hysterical mania, aggravated by local treatment of a year, and two unsuccessful operations.

Dr. J. M. Baldy read a paper before the American Gynæcological Society on "Insanity Following Laparotomy," in which he gives statistics from the insane asylums of Pennsylvania, in regard to the number of patients received after laparotomy. From eighteen institutions he received reports of fifteen cases, and reported one of his own for retocèle, after which the patient developed melancholia, and another having chronic confusional insanity after oöphorectomy.

Dr. Martin cites several abdominal operations of his own upon insane women, viz., the removal of appendages for recurrent mania. Result, moods as variable as before, and mental confusion took the place of previous excitement.

Salpingo-oöphorectomy for grand-mal, with dementia. Result, no appreciable improvement occurred in the nervous condition.

Large ovarian tumor removed for delusional insanity. Result, patient succumbed to exhaustion four days after the operation.

The questions to be answered are: Are the results lasting? Is the patient's condition definitely and permanently benefited, and will she continue to regard the operation as a blessing? That it is so constantly the case as to constitute a justification for an operation, in the absence of urgent and direct symptoms, remains to be proven.

Under the term "delirium traumaticum nervosum" the older surgeons described mental symptoms which made their appearance after surgical operations. The symptoms consisted of great motor agitation and visual and auditory hallucinations, and rarely

symptoms of a violent or stuporous type, from which the patient may recover or remain permanently insane.

Four possible dangers should be considered:

- (1) Previous insane taint.
- (2) The anæsthetic.
- (3) Fear of the operation.
- (4) Sepsis.

The essayist did not believe one factor sufficient to account for a serious result.

The chief medical error of the present day is the mistaking of brain disease for pelvic disease, and the prayer of the neurologist in behalf of the neurosthenic woman is for rest for her whole organism from needless irritation and unnecessary gynæcological operative disturbances. This does not include a protest against the treatment of the real consequences of gynæciac disease, nor of those uterine disorders which are the result of neuropathic disorder, the hyperæmias, hyperplasias, morbid growths, grave traumatism and displacements. These are surely numerous enough to keep gynæcologists employed.

The day of gynæcological errors is waning; a light shines from behind the cloud. It is the ray of the neurological sun. Through the clouds day dawns for woman's emancipation from the misery of medical error, and a true neurological gynæcology is born into the family of clinical and therapeutic science.

CONCLUSIONS.

(1) Gynæcological operations are more likely than any other surgical procedures to disturb the mind.

(2) Hereditary antecedents of the patients should always be determined.

(3) In insane patients operations should be performed only when the physical condition endangers or renders life insupportable.

(4) Patients, precedent to the operation, should be in a calm frame of mind—hence, moral treatment of the patient previous to operating is the best prophylaxis.

(5) Inherited and acquired insane constitution is the fundamental factor

in most cases of insanity. This conclusion does not, however, justify us in ignoring physical diseases immediately preceding or associated with insanity.

(6) Healthy genital organs do not give rise to reflex symptoms, consequently caution should be exercised in operating for the relief of insanity.

(7) Operations may be satisfactory in properly selected cases.

Intra-uterine Asphyxia, with Report of Three Cases.¹

BY GEO. F. HULBERT, M.D.,

ST. LOUIS, MO.

THOSE who have had the experience of believing and declaring that the child *in utero* was living and that everything was all right, and looked forward to a happy termination of the parturition then in hand, may possibly, from time to time, realize the chagrin and sense of defeat when, upon birth, the child has been found to be practically dead, yet not dead for the heart still beats with a strong but slow pulsation. Every effort at resuscitation is resorted to; you are cognizant of the fact of air penetrating and distending the alveolar spaces, evidenced by the increased vigor and rapidity of the heart pulsations; and yet in spite of that, after long-continued effort, we gradually see slip through our hands the remaining spark of life and the child is in fact dead. It having been my

good fortune, or misfortune, to have three experiences of this character occurring in my obstetrical work, I have deemed it possibly of interest, and hope it will be of some value and satisfaction to those who have had or may have experiences of this kind, to peruse these cases and draw their deductions therefrom. A similarity of circumstances and conditions appertaining to the child as well as to the mother and the character of the labors, and the fact that the normal limits were not apparently encroached upon in any respect, as well as the fact of the peculiar condition briefly detailed above, has emboldened me to call attention to the conditions and to place on record these cases, not that they are especially new or not, but that many others may have had the same or like experience, yet the fact remains that the literature does not abound with information or anything especially calling attention

¹ Abstract of paper read before the American Association of Obstetricians and Gynecologists in Detroit, June 2, 1893.

to the class of cases under consideration. The first case was delivered in a perfectly natural way, by natural force; the two subsequent ones were made instrumental deliveries advisedly, simply for the reason that I felt the possibility of a repetition. In all of them I was certain and positive that I heard the foetal heart not longer than one-half hour before delivery was accomplished; heard it distinctly but somewhat weakened in its force. At the time of delivery in all, the appearance presented by the children as they came through the vulva was one of extreme pallor, with slight if any evidence of cynosis save a deepened tinge of the lips, with absolute muscular relaxation; there being apparently no response on the part of the muscles to any irritation that might be made. The heart was pulsating at the rate of from forty to fifty per minute. The usual methods of artificial respiration were resorted to in all, to the extent of introducing the catheter into the trachea and thereby insuring a passage of air into the bronchial tree and alveolar spaces. That the air did penetrate was further evidenced by the slight crepitus easily heard during compression of the chest in the expiratory part of the respiratory act. Artificial respiration was maintained until the heart ceased beating; until it ceased to respond to the stimulus presented by the aeration of the blood by the artificial respiration. In none of them were there any external evidences of pathological conditions, development having been well accomplished. The umbilical cords were not without the normal limits and it was only when the placenta was reached that there were any condi-

tions present that might possibly account for the peculiar condition of the children. Here in all three cases were there found blood clots occupying the placental surface in over half of its area. These clots were well formed, intimately attached to the placental tissue, smooth upon the uterine side. There was nothing indicating the fact that the clot had been torn from the uterine surface, but rather that placental separation had taken place and the clot had formed and become adherent to the placental tissue.

So far as the mothers were concerned, they were in average good health—the first primipara, the last two multipara. The character of the labor was not over twelve hours' duration, and presenting nothing especially attracting attention outside of the fact that the first was one of those cases which might be termed "piston rod" form of delivery, in that the head was forced down to the perineum at each pain, and upon the disappearance of the pain promptly receded to the brim. This was frequently repeated, so much so that I seriously contemplated applying the forceps, and regret that I did not in order to enable the head to catch beneath the symphysis. The character of the pains was not sustained and vigorous in any of them, but rather more short and inefficient. In none of these cases was chloroform used, and in only one, the first, a rectal injection of twenty grains of chloral given during the first stage. The element of compression upon the head was not at all excessive and would not have attracted attention. In the last two cases there was no pulsation appreciable in the cord; in the first case he had no

record of this fact. The children were separated from the mothers immediately, and in the first a small amount of blood was permitted to flow through the severed end of the cord. Unfortunately, in none of them did I obtain a post-mortem, and, as before stated, the only anatomical lesion that I could testify to is the presence of the blood clot occupying an extensive part of the area of the placental surface. There was only a moderate amount of the amniotic fluid following the birth of each child. In the first two cases dilatation was well advanced before the membrane ruptured; in the last case rupture occurred at the beginning of dilatation.

The points for consideration in the above are:

(a) The presence of the fœtal heart pulsations so soon before delivery.

(b) The moral character of the labor.

(c) The extreme pallor and relaxation of the child at birth.

(d) The presence of the cardiac pulsation after delivery.

(e) The absence of any attempt upon the part of the child to perform the respiratory act.

(f) The response upon the part of the heart to the benefits of accomplished artificial respiration.

(g) The anatomical conditions presented at the placenta.

ABSTRACT.

Fibroid Tumor Complicating Delivery.

BY T. J. CROFFORD, M.D.,
OF MEMPHIS, TENN.

At the meeting of the Tennessee State Medical Society, in Nashville, on April 12, the author reported a case at some length in which a fibroid tumor complicated delivery. The woman, a primipara, was six months pregnant and had been in labor six days. The uterus could not empty itself on account of the fibroid growth encasing the whole cervical canal, preventing its dilatation. An arm of the tumor also projected in front of the mouth of the uterus, mechanically interfering with the passage of the contents of the organ. The pregnant

uterus was high up in the abdomen, and occupied the left side. The tumor was lower down and to the right of the median line. The diagnosis was, of course, obscure. The case was seen one hundred miles away, in the country. The author was sent for the purpose of doing a Cæsarean section, which would have required the supplement of a Porro, owing to the presence of sepsis. The poor equipment at hand caused him to remove the patient to Memphis. Arrangements were made for the operation, but the woman was so extremely

exhausted that Doctor Crofford concluded to make a desperate attempt at delivery from below before subjecting so weak a woman to so formidable an operation. She was anæsthetized and placed in the lithotomy position. By making great pressure upon the vaginal portion of the tumor, the Doctor finally succeeded in somewhat pushing it aside; then by means of traction upon the womb it was brought somewhat lower. The cervical canal was forcibly dilated, in spite of the surrounding band of the fibroid growth. The hand was next introduced and one foot of the fœtus grasped and the delivery proceeded with. A trained assistant using the Crêde method upon the outside the placenta was finally delivered. Under hypodermics of strychnia and other stimulants the patient was rallied, became more comfortable, and for a time progressed more favorably. The sepsis, however, continued in spite of daily uterine irrigations. Seventeen days later, although the patient was quite weak, the abdomen was opened with the idea of removing the offending growth, and, if necessary, the uterus as well. It was after the abdomen was laid open that the diagnosis was made, and the relation of the uterus and tumor was first fully understood. The adhesions were so great, however, that it was not thought that the patient could stand the breaking up of these with the addition of a hysteromyomectomy. The uterine appendages were removed, hoping to cause a shrinkage of the tumor. The condition of the patient did not seem to be made worse by the operation. The uterine irrigations were kept up. Six days later septic symptoms became still

more formidable, the temperature going to 106° and the pulse to 145 beats per minute. Upon investigation the vaginal portion of the tumor, as well as the interior of the uterine canal, was found to be in a sloughing condition. The patient was again anæsthetized and placed in the same position as before, when the author, by means of a knife and scissors, removed large sections of the lower portion of the tumor, seared it with a thermo-cautery, then curetted and irrigated the uterine canal and packed the same with gauze. For three days she improved. This procedure was gone through with some half-dozen times, at intervals of three days, until almost the whole of the tumor and a large portion of the uterus were removed. The patient finally made a complete recovery.

Doctor Crofford further stated that while this case teaches that it is not wise to apply the popular radical measures of the day to all such cases irrespective of the conditions existing, yet he emphasizes the fact that the successful termination of this case should not be construed as a superiority of the measures adopted over the Porro operation. But on the contrary he had no doubt that the Porro operation in this class of cases, in the hands of an experienced operator, offers safety beyond the measures here adopted, and would have gladly been utilized in this case had the patient been seen in time, or had her condition at any time thereafter justified it. The measures adopted as above given were the only ones that in his opinion, offered any reasonable hope of a successful termination in this particular case.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

ORIGINAL COMMUNICATIONS.

Diphtheria Associated with Scarlatina ; A Clinical Study.

BY WILLIAM P. MUNN, M.D.,
OF DENVER, COL.

THE intimate association of a diphtheric sore throat with scarlatina has been a subject of observation and study for many years. It has been distinctly stated by some writers, pre-eminently by Strümpell, whose verdict carries a certain weight, that the membranous disease which so often occurs coincidently with scarlatina is not true diphtheria, and the following assertions are made in proof of his position :

- (1) The membrane is pearly-gray in the beginning.
- (2) The larynx is rarely involved.
- (3) The mortality is low.
- (4) Paralyses are rarely noted.
- (5) True diphtheria is never communicated from these cases.

I shall briefly place in juxtaposition with these statements the results of

an analysis of a series of consecutive cases in which the diphtheric disease was so intimately connected with scarlatina that it would usually be denominated "scarlatinal diphtheria." The fifty cases upon which my conclusions will be based occurred in a series of 165 cases of diphtheria.

First, and very briefly, as to the character of the membrane. When diphtheria is seen early, the thin, newly-formed membranous exudate is most frequently a delicate pearly-gray smear or patch, becoming yellowish, dirty-gray, brown or black as it thickens and becomes a necrosis product. Those observers who usually see diphtheria cases for the first time only after the membrane is extensive and necrotic changes have already begun, naturally fall into the error of think-

ing the membrane to be dark colored from the beginning. On the other hand, when diphtheria is superimposed upon a scarlatinal throat already under observation, its first stages are more frequently seen and carefully observed. Every pearly-gray throat accompanying scarlatina must not, however, be called diphtheria, but the progress of exudation and of necrotic changes must be relied upon to demonstrate the reality of the membrane formation and to differentiate from the pearly-gray color given to the throat by tenacious muco-pus. Rapid advance of the membrane into the nose or larynx, or on to the palate, which is very frequent, will re-

move all doubt, while the necrotic changes, with their accompanying characteristic diphtheria odor, render diagnosis possible without inspection.

Of the fifty cases of diphtheria associated with scarlatina either coincidently or causatively, eleven in all died, a mortality of 22 per cent.; all of the eleven had nasal involvement, and eight of them had laryngeal involvement. Two with membrane in the larynx recovered, and thirteen having nasal involvement recovered. Let us compare in tabular form with similar facts regarding the 115 cases of diphtheria that were not associated with scarlatina.

	NO. OF CASES.	NO. OF DEATHS.	PER CENT. OF DEATHS.	LARYNX INVOLVED.	PER CENT.	NOSE INVOLVED.	PER CENT.
Diphtheria associated with scarlatina	50	11	22	10	20	24	48
Diphtheria not associated with scarlatina	115	20	17.4	18	15½	25	22

This comparison plainly shows that when diphtheria is associated with scarlatina it is proportionately more fatal in the ratio 22 : 17.4; that laryngeal involvement is more frequent, in the ratio 20 : 15; and that nasal involvement occurs more frequently, 48 : 22. This is what we would expect from the addition of a septic, necrotic, diphtheric process upon a disease which has already rendered the mucous membrane of the upper respiratory tract inflamed and susceptible; which has by its depressing effect upon the emunctories and the digestive tract, decidedly lowered the resisting power of the patient. In-

creased mortality is largely due to greater severity of diphtheric manifestations when grafted upon such receptive conditions as accompany scarlatina, and not to the scarlatina itself. In a parallel series of about 200 cases of scarlatina, there were but two deaths, a death rate of 1 per cent.

Since adopting energetic mercurial treatment of all varieties of diphtheria, paralyzes have been less frequent in my experience, and, as a rule, quite transient. In three of the fifty cases paralysis was sufficiently marked to be made note of.

As to the relationship of simple, uncomplicated diphtheria to scarla-

tina: in eleven of the fifty cases diphtheria *existed alone as a result of exposure to coincident scarlatina and diphtheria*, two of the eleven having previously had scarlatina; in five it *existed alone from exposure to uncomplicated scarlatina*, two of the five having previously had scarlatina; in two scarlatina occurred following recovery from uncomplicated diphtheria and without scarlatinal exposure; in thirty-two the two disease processes were practically coincident, although in some the diphtheria was manifest from two days to a week before the scarlatinal rash appeared, and in one scarlatina was quite recovered from two weeks before the diphtheria appeared, there being no other exposure.

This study being purely clinical, and as I have made no bacteriologic examination of cases, any consideration of their microbic classification is out of the question. But this much may be said: that as regards prognosis, treatment or precautionary measures, it is a matter of indifference whether the diphtheria which occurs in association with scarlatina is of streptococcus or bacillary origin.

It is as contagious as uncomplicated diphtheria; it may communicate uncomplicated diphtheria; it is more fatal than uncomplicated diphtheria; the clinical aspects of the two diseases are identical. For these reasons the clinician and the hygienist must classify it as ordinary diphtheria simply occurring in conjunction with scarlatina, with its virulence rather intensified by the association.

To recapitulate: The points that I consider proven by analysis of this series of cases are as follows:

(1) The membranous sore throat which so frequently occurs associated with scarlatina is true diphtheria.

(2) Association with scarlatina increases the fatality of diphtheria.

(3) Laryngeal and nasal involvement are more frequent with the associated diseases than with uncomplicated diphtheria.

(4) Paralysis does occur as a sequel.

(5) Both scarlatina and the so-called scarlatinal diphtheria may communicate diphtheria without any scarlatinal accompaniment, both to those who have had, and to those who have not had, scarlatina previously.

ABSTRACTS FROM CURRENT LITERATURE.

Chlorine-water in Diphtheria.

ELLIS (*British Medical Journal*, May 13, 1893) has used a solution of chlorine-gas in 200 cases of diphtheria with excellent results. He prepares the solution by placing twenty to thirty grains of potassium chlorate in a *dry* eight-ounce bottle and pouring upon it ten minims of hydrochloric acid. The bottle is filled with water

after all the gas is evolved, and the whole well shaken. The mixture is made palatable by the addition of glycerine. It may be diluted for very young children. If the child is too young to gargle, a few drops may be given every half-hour. It is most efficacious when used as a spray.

Therapeutics of Pneumonia in Infancy and Childhood.

JACOBI (*Archives of Pediatrics*, April, 1893) speaks as follows concerning the treatment of pneumonia at this period of life: Labor cases should be isolated. Early calomel purgation is valuable in many ways. Temperature is to be interfered with only when it causes untoward symptoms. Phenacetin, antipyrin and acetanilid have more frequently lowered the temperature than saved lives. He recommends quinine during the remissions. Cold, from its refrigerant and stimulant action, is the best antipyretic, especially in the form of the cold pack, for twenty to forty minutes, on chest and thighs, with the arms left out; ice may be rubbed over the surface of the pack. In anæmic babies the pack should be tepid. Alcohol is not needed at first, as a rule. A few full doses of digitalis is better often than its continuous use.

Insufficient peripheral circulation with small pulse demands a vasodilator with the digitalis, and nitroglycerine, gr. $\frac{1}{300}$ to $\frac{1}{100}$, or sodium

nitrite, gr. $\frac{1}{10}$ to $\frac{1}{3}$, may be given hourly or bi-hourly. Aconite at this juncture may be very valuable in half-drop or drop doses, with or without digitalis, every two or four hours. A strong mustard bath for the feet may at times be invaluable.

Oxygen inhalations through the nose may be of service in gaining time. When direct stimulation of the heart is required strychnia may be used hypodermatically in doses of gr. $\frac{1}{100}$, repeated; or ammonium carbonate, gr. $\frac{1}{2}$ to gr. 1, every half, one or two hours. Camphorated oil, 20 per cent., hypodermatically, in six to twenty minim doses, will prove most efficient. During the period of incipient resolution, with insufficient expectoration, steam, with or without turpentine, may be employed, or teaspoonful doses of camphor water or carbonate of ammonium. Ten to twenty grains of ammonium chloride, volatilized over a flame, will stimulate the bronchi more effectively than its internal administration.

Treatment of Croupous Pneumonia in Children.

THIS subject is discussed in the *British Medical Journal*, April 15, 1893. Goodheart employs a little acetate of ammonium to induce diaphoresis; paregoric or Dover's powder to relieve pain without interfering with the action of the skin; aconite in acute cases; ammonium carbonate as a stimulant; an occasional dose of an antipyretic might be useful. Poul- tices had been abandoned in favor either of hot or cold packs and a light cotton-wool jacket. He considered that the ice-bag to the chest was a very valuable method of treatment, and one that might safely be adopted in all but the youngest children with- out any undue precautions.

Ashby, in addition to the above, uses digitalis or alcohol, and has found oxygen inhalation very useful as a temporary restorative. The graduated bath in hospital practice had been followed by considerable success, but it requires care, as alarming depres- sion might easily be produced.

West has found that antipyretic drugs are of doubtful value; baths and packs have their uses, but also abuses. Dyspnœa and cyanosis have but one means of relief—free vene- section. Among the cardiac tonics he would give a high place to caffeine, either by the mouth or subcutaneously.

Enteroclysis in the Summer Diarrhœa of Children.

MÜLLER (*Therapeutic Gazette*, Au- gust 15, 1893) reports seventy-eight cases of diarrhœa in children treated by irrigation, together with careful hygienic measures, dietetic restric- tions and suitable internal remedies. His conclusions are as follows:

(1) That intestinal irrigation may be considered a valuable adjunct in the methodical treatment of suitable cases of summer diarrhœa.

(2) That irrigation with cold or ice- water will lower the temperature of the lower portion of the abdomen by direct refrigeration of the blood-mass, and that the procedure is indicated when high temperature, lasting for a considerable time, endangers life by coagulating the cerebral fluid or car- diac protoplasm, or when accumula- tion of fœces, mucus, etc., in the bowel causes a continued irritation of its mucous membrane.

(3) *That the dangerous effects of the poisonous animal alkaloids are either diminished or counteracted or dissi- pated by irrigations.*

(4) That the influence on the circula- tory apparatus is shown by the change in the pulse, which becomes less frequent and stronger.

(5) That systematic enteroclysis re- sults in an amelioration of the symp- toms and a shortening of the course of the affection, and will often over- come the semi-paralytic condition of different organs.

(6) That the resistance which the fever offers to its reduction by this method is an index of the gravity or mildness of the case.

(7) That alcoholic stimulants are of importance in the treatment of the summer diarrhœas of children.

Berberine Sulphate in Leucæmia.

VEHSEMEYER (*Therap. Monatsh.*, No. 4, 1893) reports a case of leucæmia in a child, aged 9 months. He first administered the tincture of barberry, a few drops daily, and as this seemed to act favorably, the tincture was discontinued, and berberine sulphate, three parts in 3500 of alcohol, substituted. Of this solution five drops were given several times daily. In addition, the swollen glands were

treated with an ointment containing in thirty parts, five parts of ammonium chloride and one part of camphor. Under the treatment the glands diminished in size, the grave symptoms completely disappeared, and the general condition showed marked improvement, when, unfortunately, death resulted from convulsions incident to teething.

Congenital Cirrhosis of the Liver.

NEUMANN (*Berliner klinische Wochenschrift*, May 8, 1893) reports a case of congenital cirrhosis of the liver. The patient was a girl of 4 months, who had suffered from birth with jaundice. The skin and all mucous membranes were deep yellow, the general condition was bad, the child took little nourishment and passed infrequent stools without the slightest yellow color. Treatment was of no

avail. Liver and spleen were both enlarged. After death all organs were found normal except spleen and liver, which were enlarged and hard; the gall-bladder was empty. Microscopic examination showed a cirrhotic condition of the liver tissue. The gall-ducts were patulous, but empty. The parents were syphilitic and the mother also tuberculous.

Pseudo-membranous Angina due to Streptococci; Benign Form.

BARBIER (*Mal. de l'Enf.*, x, 1892) states that pseudo-membranous angina of streptococcus origin may be accompanied with the gravest local phenomena and symptoms of general infection similar to those of true diphtheria. He speaks of the necessity of detecting the Klebs-Löffler bacilli to avoid making errors in diagnosis.

In the benign form due to streptococci, the inflammation from the beginning is more acute, the fever is higher and deglutition is very painful.

On the other hand, fœtid odor, blackish membrane, marked glandular involvement, prostration and general indications of an infectious disease point to true diphtheria.

These benign anginas rapidly recover under antiseptic treatment. A gargle of salicylic acid, 1 per cent. in hot water, is efficient; indeed, rapid improvement under this treatment is another sign indicating pseudo-membranous angina the result of the streptococcus infection.

Invagination Successfully Treated by Insufflation of Air.

SOULBY (*Lancet*, No. 3630) reports a case of invagination successfully treated by insufflation of air. The patient was a boy 5 years old, who has suffered from slight diarrhœa for two days, passing scanty blood-stained stools. He had colicky pains, vomiting, coated tongue and sausage-shaped tumor in the right iliac region. The temperature was normal. Tincture of opium was given; this relieved the pain, but was not followed by any amelioration of other symptoms. The belly became tympanitic, the sausage-shaped tumor increased

in size, the general condition was critical. Enemas of warm water were given without avail; air was then continuously pumped in with a Higginson syringe. During this injection the boy toward the close shrieked from pain, and apparently the invaginated bowel was reduced. Shortly afterward he had full movements, the first containing blood and a little fæcal matter, the second fæcal matter and blood, and the third fæcal matter only. From this time on he rapidly convalesced.

PÆDIATRIC THERAPEUTICS.

DIARRHŒA.

Mencke (*L'Union Médicale*) recommends the following for the diarrhœa of children :

R. Pulv. resorcin,	gr. xv.
Tinct. opii camph.,	℥iv.
Aque destil.,	℥ij.
Syrupi,	℥ij. M.

SIG.—A teaspoonful every two hours.

PILOCARPINE IN DIPHThERIA.

Hirschfield (*Am. Med. Gazette*) claims excellent result from the use of pilocarpine. For a child of six years he prescribes as follows :

R. Pilocarpin,	gr. $\frac{1}{2}$.
Spt. vin. gal.,	℥iv.
Syr. aurant.,	℥i.
Aque,	q. s. ad. f ℥ij. M.

SIG.—One teaspoonful every two hours.

INFANTILE COLIC.

Hare (*Col. and Clin. Rec.*) recommends the following in infantile colic :

R. Sodii bromidii,	gr. xlvij—xcvi.
Chloralis,	gr. xxiv—xlvij.
Syr. lactricarii, q. s. ad.,	f ℥ij. M.

URTICARIA IN CHILDREN.

The following prescription is recommended in *L'Union Médicale* :

R. Chloralis,	gr. x.
Pulv. camphor,	
Pulv. acaciæ, āā	℥ij.
Cerat.,	℥ij. M.

Triturate together the first three substances until liquefaction occurs, then add the cerate. Apply the ointment at night to the affected area. It diminishes itching and produces sleep.

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ORIGINAL COMMUNICATIONS.

Removal of the Uterus and Its Appendages for Pelvic Inflammatory Disease.¹

BY J. M. BALDY, M.D.,

Professor of Gynæcology in the Philadelphia Polyclinic ; Surgeon to the Gynæcean Hospital.

IT was supposed when we had all learned the lesson that Mr. Tait fought so long and valiantly to teach us, that the question of the treatment of pelvic inflammations and their ravages had been finally settled. The removal of the displaced and adherent Fallopian tubes and ovaries, which contained pus or whose tissues were hypertrophied and infiltrated with chronic inflammatory products, soon became a common procedure and the technique of the operation was so rapidly pushed to perfection that many operators arose whose results successfully rivaled those of Tait himself. Large numbers of women who had formerly been doomed to a hopeless invalidism were now restored

to health and useful lives. So frequently were these happy results obtained and reported to an expectant profession that sight was lost altogether, for the time, of certain cases, afflicted with these same diseases, on whom the same operation had been performed, but who were not blessed with the same good results as their more fortunate sisters. The glamor of success of an entirely new and brilliant procedure so greatly overshadowed these poor sufferers that time was necessary before attention could be directed towards them. As is often the case the enemies of the new procedure were the first to point out this class, not from any particular desire to aid in the complete solution of the problem, but from a spirit of criticism which says, "Lo and behold!

¹ Read before the Obstetrical Society of Philadelphia, October 5, 1893.

thy vaunted remedy has failed." It had failed to a certain extent, it is true, and the taunt sufficed to draw closer attention to the failures and a deeper study as to why they had failed.

You are all of you cognizant of patients in your practice on whom an abdominal section has been performed for pelvic inflammatory disease, who consults you for continued bleeding, leucorrhœal discharges (often profuse) and pain—women who have had the operation performed for these symptoms and who complain now, three months, six months, a year after the operation, of the same kind and the same amount of suffering. You are familiar with such cases, coming both from your own practice and that of your neighbor. They come into the public clinics in considerable numbers complaining of the operator and refusing to return to him for the reason that they had thought the operation would cure them, and because it had not their doctor was to blame, as usual, and as a matter of course. These are the same patients who are held up to us as a proof that our method of treatment is wrong and has failed and should, therefore, be condemned in toto. The time has not even yet passed when we must submit to just such spurious criticism.

But, as a matter of fact, a certain too large proportion of our patients still remain uncured by a simple removal of the uterine appendages; and let me emphasize the fact that I am now discussing a class of patients who have an easily demonstrable amount of disease of these organs—no reference is intended to that too numerous class on whom operations

are performed for symptoms alone, no disease being found by a physical examination and none capable of clear demonstration even after the organs have been removed.

Local applications to the uterus after a coeliotomy for removal of the appendages has been tried, with no greater success than the same amount of treatment before the surgical procedure. Curettement of the womb has been followed with little more encouraging results. I have adopted this course in some six or ten cases, and have not been able in a single one to say that I had cured the woman. The majority of them ceased coming for treatment long before any decided result had been obtained. During the past winter it was my misfortune to see a number of these women who had been unrelieved or only partially relieved in spite of the fact that a complete and clean removal of both appendages had been made and that the remaining uteri were freely movable. No trouble could be detected in the pelvis by a most careful and repeated physical examination.

After applying local and general treatment to several of these women, until we were both discouraged and disgusted, I, in despair, suggested that the womb itself be removed. I was led to this decision from the fact that I had known some months before of a case on whom my colleague, Dr. Baer, had performed several abdominal sections in, I think, a neurotic case, without obtaining much relief, and upon whom he had finally performed hysterectomy with an extremely satisfactory result. This, in addition to the work being done in France in the way of hysterectomy

for pelvic abscesses, evidently influenced my thoughts in this direction. The woman to whom I proposed the operation had had her original operation for suppurating uterine appendages. Months after her operation she still had a large uterus, irregular bleeding, profuse leucorrhœal discharges, great backache and pelvic bearing-down pains. The uterus was removed by supra-vaginal amputation low down into the cervix, and dropping the stump back into the pelvis. Her recovery was an uninterrupted one. The bleeding and leucorrhœal discharges ceased at once, and the pelvic pains and backache almost entirely disappeared, the little that remained of them being evidently due to the menopause. Encouraged by this result, I have continued this line of treatment up to the present time, and have now had sufficient experience to feel warranted in recommending the procedure to your careful consideration and trial. In two cases have I removed the uterus subsequent to a simple removal of the appendages. Six times have I removed it at the primary operation.

It is well known that in pelvic inflammation the disease first affects the womb, and secondarily invades the Fallopian tubes and the pelvic peritoneum. Not only is the endometrium affected, but the inflammatory products invade the deeper structures which go to make up the uterine walls. If a suppurative process follows, these infiltrates undergo the same changes as do the same elements in the walls of the Fallopian tubes. The ease with which a ligature cuts through uterine tissue, when applied at the cornua in cases of pus tubes, is a well-known demon-

stration of the truth of this. With a Fallopian tube and uterus, both of which are diseased by the same factor and to the same extent, is it rational to suppose that a cure is to be always obtained by the removal of the tube alone? Is it not common sense to remove the whole of the disease, and not only a part? Theory and practice both combine in this matter to force the conclusion.

It must not be understood that I recommend the removal of the uterus together with the Fallopian tubes and ovaries in all cases of pelvic inflammatory disease. In many cases the uterus has succeeded in throwing off the original infection, and is comparatively healthy. Under such circumstances the procedure is not indicated. But where an abdominal section is performed for the removal of the uterine appendages, and the womb is found enlarged and diseased, especially if it has been surrounded by extensive adhesions, and the freeing of it leaves large areas of denuded peritoneum, hysterectomy should be the operation of choice. But a single objection can be raised to this proposition, viz., the mortality of the operation. Can, then, hysterectomy be performed as safely as ovariectomy? Unhesitatingly I answer in the affirmative. My own hysterectomies now number more than eighty, with seven deaths. These deaths include the accidents incident to acquiring the skill and perfecting the technique; in a similar series the results will be infinitely better.

Beyond the question of mortality there can be no doubt as to the advisability of removing the diseased uterus. With its appendages gone it is an altogether useless organ, and

even the old, familiar cry of mutilation and unsexing the patient has no place.

I am free to confess that since adopting this method of practice the field for hysterectomy has greatly widened. For instance, I assented and assisted in an operation for the removal of the uterus in a woman upon whom seven abdominal sections had been performed without giving her relief. The uterus was enlarged, and was found to contain several small fibroid nodules, as large as a hickory nut, which had undergone calcareous degeneration. The patient was relieved at once, and continued so for some months, when she disappeared from observation.

Only last Sunday I performed an abdominal section for double ovarian cysts. One cyst proved to have grown into the broad ligament, while

the second one was free. The uterus was very large, half as large again as normal. The operation was finished by making a clean sweep of both tumors, Fallopian tubes and uterus. The patient is convalescent, and is, I think, distinctly better without the womb, which I exhibit to you.

Looking at this matter as I do, it has been no great matter of surprise to me to find other operators adopting this procedure. Last spring, while visiting in New York, I found that Krug had arrived at much the same conclusion, and was following a like practice. During a recent visit to Chicago I discovered that Heurotin was working on the same lines, and I have no doubt but that after a winter's agitation on the subject most of the profession will be won over to a similar manner of thinking and to the same practice.

Hydatidiform Mole of Uterus.¹

BY HORACE FOX, M.D.,

PHILADELPHIA.

WHEN reading a paper before this society some time ago, I presented a specimen of hydatidiform mole of the uterus and mentioned, incidentally, that I would report it in detail at some future meeting. As the patient could neither speak nor understand English, I was compelled to use an interpreter in obtaining her history, and it was, therefore, rather unsatis-

factory and not as full as I should liked to have had it.

Mrs. W., white, aged 28, Russian nativity, and her occupation housework.

Previous History.—She had been delivered previously of four healthy children. All of them were full term, head presentations, and none were delivered with the aid of instruments. Her last child was born in 1887. She had menstruated regularly from that time up to the period of this her last

¹ Read before the Obstetrical Society of Philadelphia, October 5, 1893.

impregnation. She never had an abortion, miscarriage or premature labor. There was no history of the parents on either side having had a similar affection. She, herself, was never before so affected. She had no fibroid, nor was she affected with a cancerous or syphilitic disease. There was not any organic lesion of the heart, and whether or no she ever had anæmia or disease of the uterus I do not know, as it was impossible for me to find out.

Present History.—Mrs. W. left Philadelphia Hospital about one day before I was summoned to attend her, and when she left the hospital she was not bleeding from the uterus nor had she any symptoms that labor was about to set in. The disease with which she was affected had not been diagnosed, as she stated, the physician in attendance told her she was pregnant. The evening of the day she left the hospital she had some little hæmorrhage from the uterus, accompanied with slight “bearing down pains.” This ceased almost entirely in about two hours, but about 2.30 the following morning the pains increased in frequency and the uterine hæmorrhage was very profuse. At the above said time she said she passed something which she thought was “clots.” A physician was then summoned and she was given, by him, a hypodermatic injection, presumably of ergot. The hæmorrhage ceased somewhat after the hypodermic was given, but re-occurred again at intervals up to 9 A.M., at which time I was summoned. The

patient was then in a collapsed and anæmic condition. Vaginal examination revealed the vagina and uterus completely filled with a grape-like looking substance, cervix soft and easily dilatable, so much so that I could readily explore the uterine cavity with my index-finger. I cleaned out the vagina and then curetted the uterus with my index-finger, removing, in toto, enough of the mole to fill the cavity of a high black silk hat. She was then given a 1-2000 hot bichloride intra-uterine and vaginal douche, followed by a hot water intra-uterine and vaginal douche. The uterus was well manipulated and she was put upon energetic treatment for her collapsed condition. She came out of her critical condition about 4 P.M., and from then continued to improve and finally made an excellent recovery. The specimen was carefully examined macroscopically, but no foetal portion could be discerned, and therefore, it is evident that the villi of both the chorion and placenta became dropsical at a period near that of conception, and thereby caused the solution of the foetus. The diagnosis of this affection is extremely difficult, and it is only when the cervix is soft and patulous, permitting your finger to explore the uterine cavity, that the diagnosis becomes certain.

On May 22 of this year, Mrs. W. was delivered by me of a three-and-a-half months miscarriage. No traces of the previous affection was discernible. I should have stated that Mrs. W. was delivered of the mole, June 5th, 1892.

Exploratory Cœliotomy for Ascites Abdominalis.¹

BY FRANK W. TALLEY, M.D.,
PHILADELPHIA.

THE object in reporting the following two cases is to obtain the opinion of the members of the Society in regard to the proper methods of handling such cases in the future. They were both cases of ascites abdominalis in which the question of tapping or of opening the abdomen for the relief of the distension presented itself. Both were subjected to abdominal section.

The first case was that of a 37-year-old virgin, who gave the history of good health until nine months prior to the time I first saw her. Since then she had experienced pains over the lower half of the abdomen and distension, which had grown in severity and degree until for the last three months she had been confined to her bed and couch. The abdomen was enormously distended, there was some œdema of the ankles, and her general health was poor. There was a history of tuberculosis in the maternal grandparent. The urine was normal and the heart in good condition. The vaginal examination was negative on account of the great distension of the belly, œdema of the labia and the virginal condition of the genital passage. Dr. Parish, who very kindly saw the case with me, regarded it as carcinoma, probably of the ovaries, on account of the œdema of the ankles evidencing pressure on the great vessels in the pelvis. Cœliotomy was performed a

few days later, a small incision being made, and the fluid evacuated. Both ovaries were found the seat of advanced cancerous disease which had involved the broad ligaments and pelvic tissues to such an extent that their removal was not to be considered. The omentum was the seat of metastatic carcinomatous nodules, one of which was injured in the manipulation and required the use of a ligature. After evacuating the fluid the wound was closed, and the patient subsequently succumbed to the natural course of her disease.

The second case was that of a woman of uncertain age, probably 50 years, for the permission to operate upon whom I am indebted to Dr. Baldy. She was when seen in a semi-conscious condition, and no history could be elicited from her. The belly was enormously distended to such a degree that it was impossible to place her in the dorsal position. The legs were also œdematous.

The abdomen was opened after cutting through a greatly thickened wall and the fluid allowed to evacuate. The pelvic cavity was then explored by the finger introduced through the wound and the pelvic organs found quite healthy. Although the peritoneal cavity had emptied, there was yet a considerable flow of fluid through the wound from the connective tissue. It was, therefore, decided not to suture the wound, but to leave it open for drainage. It was simply dressed with

¹ Read before the Obstetrical Society of Philadelphia, October 5, 1893.

a few layers of gauze and a tight binder applied. On the following day the patient's condition had improved. The binder had become so loose as to be displaced, and the bed-coverings and bed were quite wet with the serum which had exuded from the connective tissues.

The question which I wish to advance by the consideration of these two cases is, should paracentesis abdominalis or coeliotomy be selected for the evacuation of ascitic fluid in the female belly in cases where the heart and kidneys are excluded as causal agents?

In deciding such a question the relative dangers of the two procedures should first be considered. The dangers from puncture of the abdomen by the trocar or aspirating needle, while rarely occurring, are several. Thus the trocar may puncture an adherent gut and an extravasation of feces necessitate a hurried section and possibly the death of the patient. If the omentum be adherent to the abdominal wall a vessel may be injured. In this case the blood escaping with the serum might readily convey the impression that the case was malignant, and the surgeon thus misled might easily refuse operation to a patient who was suffering from a benign growth.

Again septic matter contained in the instrument or pushed forward from the skin of the abdomen may be conveyed to the peritoneal cavity and septic peritonitis result.

With the exploratory incision the only danger which would apply is the very slight one of septic infection, and should sepsis occur under these circumstances it would very decidedly reflect upon the operator's technique.

Concerning the respective advantages of the two procedures, tapping simply evacuates the ascitic fluid and renders a diagnosis by bimanual examination probable. The fluid will not wholly be removed and will return to necessitate a future tapping. If coeliotomy be performed, however, and the finger introduced into the peritoneal cavity, the character of the disease, its seat and extent will be recognized. The disease can then be relieved by immediate operation or a future date set for the removal if amenable.

The conditions usually associated with ascites in the female are: Ovarian cancer, tubercular peritonitis, and ovarian papilloma.

In ascites due to carcinoma of the ovaries, the extent of the infiltration, and the question whether or not it may be removed in healthy tissue, can only be determined by exploratory incision, and the condition of the patient is none the worse than if she had been simply tapped.

The diagnosis of tubercular peritonitis can only be suppositional, and never positive, until the peritoneum is exposed to examination by the eye or finger. Simple tapping in these cases is usually followed by a refilling of the peritoneum, necessitating its repetition. In some unexplained way recovery from this condition frequently follows abdominal section. It has been advanced that this is due to the entrance of air to the peritoneum. Probably the more complete emptying of the contained fluid by this method has some influence in the result.

Papilloma of the ovary gives rise to a high grade of ascites, and the condition is not readily recognized by

abdominal palpation if simple tapping be done. The ascites returns usually after tapping.

Ascites may also be due to benign tumors, which could readily be detected on palpation after tapping, by their size, yet whose nature and amenability to operative interference would remain undetermined.

Considering, therefore, the greater ease in performing the simple incision, the lesser risk subsequently,

though both are very slight, the thorough knowledge which it gives of the condition, and the fact that in a high degree of ascites the diagnostician can only go so far as to say that the fluid is free, not encapsulated, and can not point out the causal lesion, cœliotomy should be universally adopted where the ascites is not associated with lesions of the heart, kidneys, and possibly of the liver.

Abortion.¹

BY M. S. MARCY, M.D.,
PEORIA, ILL.

ABORTION is defined as the expulsion of the foetus before the seventh month of utero-gestation, or before its organs are properly formed and so developed as to permit its continued existence. As a rule, no foetus born before the seventh month is viable.

Abortion may be divided into three classes, namely, Natural, Criminal and Artificial.

It is not the object of this paper to occupy the brief time allotted to me in going into the details of natural abortion. Its various causes, effects and treatment are so well known to the profession as not to need even a passing notice. But if we can succeed in attracting your attention for a few moments, while we consider the enormity of the crime perpetrated in our midst by the professional abortionist, and, secondly, the responsi-

bility which devolves upon the physician where artificial abortion is a necessity, then shall we feel amply repaid for our efforts. I am glad that the law-makers of our land have come to a realization of the fact that the unborn child has rights which they are bound to protect; a guardian can be appointed, and it can receive property by bequest or deed.

After this became a law, a very stringent law was passed forbidding even an attempt at producing abortion. The Massachusetts statutes, and, in fact, nearly all the States at the present time, punish the crime of abortion with imprisonment for not more than twenty years, nor less than five, when the patient dies, and not to exceed seven years nor less than one, and a fine not to exceed \$2000, when the patient does not die, and anyone giving information in any way for the purpose of abortion, may be

¹ Read before the Tri-State Medical Society. October 3, 1893.

imprisoned not to exceed three years, and a fine of not more than \$1000. Not so, however, in earlier days; a great amount of debating was indulged in as to when the unborn infant received life. The common law of England and of this free country of ours declared that life did not begin until the infant was felt to move in the mother's womb, or the period of "quickening." Until recently the English law punished with death the procuring of abortion after quickening, while the same crime before quickening was regarded as mere felony. The period ranging from three to ninety days has been assigned by different writers as the time at which quickening occurs. Among the Stoics it was considered that the soul was not united with the body until after respiration. In view of the fact that the laws and the leaders of our profession only a few years ago deemed the existence of an infant up to the third month as of no importance and having no life, it should not astonish us to know that a great majority of the people still cling to this pernicious idea, and that thousands of the female sex apply to the physician annually for medicine to produce abortion, quoting the old law, that they are only three months pregnant, they have felt no life, hence it cannot be a crime.

I have had deacons of the church, and many prominent men, who would blush to do a wrong, apply to me for medicine for their wives to produce abortion, all offering the same argument: No life, no crime. I am sorry to state that many physicians, for the sake of gain and friendship, yield to this argument, and not only disgrace our noble profession, but commit a

crime by violating the laws of our land and of the Bible, which says, "Thou shalt not kill." The duty of the physician on this question is plain. The fact that just as soon as the spermatozoon enters the ovum, life begins to develop, admits of no argument, and the person who even attempts to destroy this life maliciously, has committed a crime according to the laws of our land. When a lady steps into a physician's office and asks for medicine to produce abortion, he should at once explain to her that she is asking him to commit a crime, punishable by imprisonment. That her child has life, which neither he, the mother, nor anyone else has a right to deprive it of. That she is asking him to ruin her own health. He should endeavor to hold up such a picture to her view that it would convince her of her wrong ideas, and that she did not realize for what she was asking. It matters not what the circumstances may be, married, single, to save from disgrace, or what not, nothing short of saving the mother's life, should induce the physician to countenance abortion. Not even to save his own sister or daughter from disgrace. After we have used our strongest argument to convince the patient of the great wrong and injustice of abortion, our responsibility is only half completed. In the majority of cases the patient leaves the office only to seek the aid of the professional abortionists, who flourish like the "green bay-tree" in all our cities. They readily agree to perform the operation for a certain sum of money, ranging from \$10 to \$500. In a few days the patient sends hurriedly for her family physician, believing herself about to die. She confesses to her

physician that she went to a certain woman, or, perhaps, a physician, who for \$25 or \$50 did perform an operation on her. And now the physician is brought face to face with responsibility and duty. He knows a crime has been committed. Shall he conceal it under the cloak of a professional secret or make it known? The law should hold a person equally responsible with the author, who is cognizant of a crime and does not report. The lady, perhaps, belongs to a wealthy, aristocratic family, and while he may wish to bring the guilty one to justice, he hesitates and keeps the secret, excusing himself on the grounds that he does not want to expose his patient, or make her notorious by bringing her into court. Thus, the guilty wretches escape, only to become more bold in their diabolical work.

Gentlemen, I hold that to a certain degree, or just so often as these cases come to our knowledge, we are responsible for this wholesale slaughter of the unborn race.

It is the duty of every honorable physician, when he has the proof against the abortionist, to report such cases to the legal authorities. Suppose it does bring some high-toned lady into court, would not this be preferable to allowing these murderers of the unborn innocents to follow up their damnable trade in this enlightened Christian nation? Let the profession rise above the fear of exposing the patient, or losing her friendship. Come out on the side of right, and take a bold stand in this matter, and see to it that these parasites of society go no longer unpunished, but be speedily brought to justice. A few of them in each city sent to the peni-

tentiary would stop this slaughter that is increasing in our midst and blackening the fair name of America.

If you will bear with me for a few moments longer, I wish to call attention to artificial or necessary abortion. While the law does not formally recognize the right of the physician to produce abortion, yet the best judges have held that medical men are morally justified in inducing premature labor, providing the object be to save the life of the mother. The greatest cause which forces the physician to decide to produce abortion, and the only one to which we wish to call attention, is the pernicious vomiting of pregnancy and the train of symptoms which may accompany it. The mechanism of the reflex vomiting of pregnancy has been the subject of recent investigation. Tumas, from experiments on cats and dogs, localizes with tolerable precision the situation and extent of the vomiting centre. He asserts that it lies in a small space before and behind the calamus and in the deeper layers of the medulla near to, or in close communication with, the centre, which by inference presides over the organs of generation. The two distinct qualifications common to all organisms are, self-maintenance and the perpetuation of the species. A close relationship, therefore, throughout life exists between the process of assimilation and reproduction, and it is probable that their representative nerve centres act and react upon each other.

When the uterus becomes the nidus for a developing germinal mass, the molecular disturbances radiated therefrom to the reproductive centre are liable to be transmitted to the

pneumogastric as well, and induce either a feeling of nausea or actual emesis.

The diagnosis of the pernicious vomiting of pregnancy is not so easy as at first seems apparent. The frequency of this disorder is a matter of great diversity of opinion, between the Germans on one side and the Americans, French and English on the other. The records of the post-mortem examinations of the latter are unreliable, while in the few cases collected by the Germans the diagnosis has been almost invariably confirmed or negated by investigation of the dead body. Gueniot calls attention to three distinct elements in the diagnosis of the pernicious vomiting of pregnancy: (1) The diagnosis of pregnancy. This element in the diagnosis is not difficult when the pregnancy is advanced to the twelfth week; previous to this it is difficult to form a positive diagnosis. (2) The diagnosis of the determining cause of the vomiting. In the majority of cases the determining cause consists in some morbid change in the uterus. In chronic interstitial decidua endometritis the diagnosis is commonly made only after the expulsion of the ovum and the examination of the foetal envelopes. In hydrorrhœa gravidarum, however, the symptoms are often sufficient to establish the diagnosis.

When the vomiting is due to chronic gastritis or gastric ulcer or the aggravation of some other previously existing condition, the history of the case points to a diagnosis.

(3) The differential diagnosis between the obstinate vomiting due to pregnancy and that due to other causes independent of gestation.

Grievous errors in diagnosis have been made by some very eminent men in this element. Trousseau once made the diagnosis of uncontrollable vomiting of pregnancy and induced abortion in a case in which the autopsy revealed cancer of stomach. Beau made the same mistake in diagnosis in a case in which the post-mortem showed tuberculous meningitis as the probable cause of the vomiting. Horocks describes a case of severe vomiting in pregnancy, terminating in death after miscarriage, in which the post-mortem revealed encephaloid carcinoma of the liver. Hence, it behooves the physician, when he meets a case of hyperemesis, to be extremely careful in making a diagnosis—to eliminate as far as possible all previously existing lesions, such as gastric ulcer, chronic gastritis, cancer of stomach or liver, or any other condition that might aggravate the nerve centres of a patient during pregnancy, as his prognosis must be much more guarded and unfavorable should he find any of the above-named conditions co-existing with pregnancy. Some writers assert that it is doubtful whether a fatal case ever occurred from uncomplicated vomiting in pregnancy. Having established the diagnosis, the question naturally follows: What treatment must be adopted to relieve the patient? The results and success of this decision depend largely upon the accurate recognition of the adjuvant and determining causes. The treatment resolves itself into hygienic, medical, gynæcological and obstetrical. The hygienic treatment is very important in the milder cases of vomiting and is not to be overlooked in the serious cases. As the patient

is more liable to vomit when assuming the upright position, a light meal of any food that can be retained should be taken in bed at least two hours before arising. We will not attempt to name the articles of diet best suited to such patients. Suffice it is to say that it is necessary to respect their caprices and fancies. When all food taken into the stomach is rejected nutrient enema must be tried. Henry F. Campbell relates the history of a case in which he fed the patient by the rectum alone for fifty-two days. He becomes so enthusiastic on the value of this method of feeding that he says: "Artificial abortion for the relief of gravid nausea can be banished from practice, even as a last resort."

Almost every drug in the pharmacopœia has been vaunted as a specific for vomiting in pregnancy, and it is safe to say all are unreliable. No one drug or combination has ever been found to be a specific.

Early attention should be given to the gynecological treatment of these cases. Physicians are too apt to depend on drugs and allow the patient to become exhausted before resorting to this treatment.

If uterine displacement exists gentle efforts should be made to reduce the organ to its natural position, not forgetting, however, that the normal position of the pregnant uterus is one of anteversion or even mobile ante flexion. By far the most effective procedure under this heading is the local treatment of the vaginal portion. Many years since M. O. Jones, of Chicago, suggested the local application of a 10 per cent. solution of argentic nitrate in these cases. J. Marion Sims adopted the treatment and Carl Braun regards the efficiency

as considerably greater than that of any other single mode of treatment. As practiced in Vienna a hard rubber cylindrical speculum is introduced and the vaginal portion engaged within the field, a 10 per cent. solution of nitrate of silver is poured into the speculum until the vaginal portion is completely covered and allowed to remain for ten to twenty minutes. This treatment has met with such favor in Vienna as to be employed in all cases. The testimony is so strong favoring this plan of treatment, as to be considered obligatory before resorting to more radical methods.

Having exhausted the hygienic, medical and gynecological treatment, it is a fact that there are cases that still continue to vomit severely, Henry F. Campbell to the contrary notwithstanding. And now the question arises: Shall the physician fold his arms and say, as many do, "I have done all in my power," and allow his patient to continue to vomit until she breathes her last, or should he have the courage to resort to the obstetrical plan of treatment and make one desperate effort to save the patient? I take the position that it is not only the physician's duty, but that he is criminally negligent if he allows his patient to die from pernicious vomiting of pregnancy without evacuating the uterine contents. And if he hopes for success he will not wait until the patient is exhausted and has not the strength to withstand the operation, but after he has rapidly tried all other means without benefit he will call medical council to his assistance, and for his own protection, and proceed at once to dilate the os uteri and remove the contents as quickly as possible.

Only a few months ago, in the city

of Peoria, a case of pernicious vomiting of pregnancy came under the care of a medical gentleman, who, doubtless, did all in his power for her relief with drugs, but to no purpose. The patient, a strong, beautiful young wife and mother, became emaciated, weak, exhausted and blind after several weeks of vomiting. The friends, becoming alarmed, asked for council. The attending physician objected; said he had spoken to several physicians about the case and that was sufficient. The trouble was now called typhoid fever, and the drug treatment continued. The patient grew rapidly worse, and then, after a desperate struggle, died. After death the nurse discovered that the fœtus had been born during the death struggle, which would seem to be a silent reproof from nature to the physician for neglecting his duty.

Only a few weeks after the above occurrence, and on last December 8th, the writer was called to see a beautiful young married lady, who complained of nausea, severe pain in back and head, pain in region of uterus, loss of appetite, etc. After a careful diagnosis and treatment by the hygienic and drug method for a few days, I became convinced that the case was one of those of pernicious vomiting of pregnancy aggravated by an irritable spine produced by overwork and lifting the sick, as the lady had been a professional nurse previous to marriage.

The patient was requested to remain in bed with the room darkened, and, while encouragement was offered that after she had passed the third month she would get better, a vigorous plan of hygienic, drug and gynæcological treatment was pursued. The patient gradually grew worse, spine

extremely tender to the touch and painful, excruciating pain in the head day and night; could not sleep; taking food was out of the question. Digital examination showed the body of uterus low down in the pelvis, with os pointing strongly to the left side. Gentle efforts were made to restore it, without success. She began to lose strength and her symptoms became alarming. A council of three of the best physicians in our city was called at my request. They agreed with me that the only thing to do to save the patient's life was to produce abortion. On December 31, with the aid of one of the physicians and under an anæsthetic, the os was rapidly dilated with a uterine dilator, the membranes ruptured and the contents of the uterus removed. The fœtus was dead and the mother close to the border line. Fortunately very little hæmorrhage occurred, and under the skillful hand of a trained nurse she was gradually coaxed back to life.

This was the first time in my practice of fifteen years that a case came under my care where it became necessary to perform this operation, and my only regret is that the operation was not performed earlier. Gentlemen, this is the *one point* that I wish to insist on. That we should not stand by the bedside waiting for nature and our nauseous drugs to save our patients, until they breathe their last, and nature reproves us by producing abortion with the death struggle. But after carefully trying every other means without relief, call competent council and produce abortion while the patient has strength enough to withstand the ordeal, and thus save her life.

Synopsis of One Hundred Operations for Severe Structural Diseases of Abdominal and Pelvic Organs of Women.

BY I. S. STONE, M.D.,

WASHINGTON, D. C.

THE synopsis shows briefly the result of laparotomy in 100 cases of pelvic or abdominal disease. The only exception to the word laparotomy, as may be observed in the report of cases, is in the vaginal hysterectomies and operations on the kidney and liver. The seventeen cases of pelvic abscess give a mortality of five. Of the seventeen, seven resulted from infection after abortion. In four, gonorrhœa was known to have been the cause. In four, puerperal sepsis caused the suppuration, and in the remaining cases the cause could not be ascertained. The quantity of pus varies greatly, although it may be in quantity sufficient to form a tumor reaching the umbilicus. Characteristic necrotic adhesions occur in every case. These are seen chiefly upon the bowel surface of the abscess. The author has found the intestine involved in every case, and insists upon this pathological pre-requisite as essential to the formation of a pelvic abscess. In no case was the suppuration limited to the layers of the broad ligament, nor could the pus have been reached satisfactorily by aspiration. Aspiration may be done in certain cases and greatly improve the condition of the patient, but, as a rule, laparotomy should be done later. All patients surviving the operation make excellent recoveries. The greatest danger is from shock, which has caused the mortality in the author's experience.

In twenty-seven of the list marked pyosalpinx and tubo-ovarian abscesses, pus was present and poured out of the incision when the enucleation was undertaken. Thirteen of these were a result of gonorrhœal infection; the remainder, for the most part, were due to sepsis following abortion. Pelvic peritonitis was generally present to a greater or less extent.

Of the thirty-three cases classified under the heading "infectious," two deaths occurred. One of these was due to pyæmia from an unsuspected missed abortion, the other due to shock after operation during an acute attack of pelvic peritonitis. All operations for pus are justifiable, as shown by the prompt recoveries made after the first danger (shock) has passed.

The author rarely extirpates the uterus for cancer, as he seldom finds a case sufficiently early in development to insure permanently good results.

UTERINE MYOMATA.

The eleven cases reported give three mortality. No special method has yet given satisfactory results, although complete extirpation promises well and gives the most painless and satisfactory results.

All ovariectomies for tumor have recovered, although severe complications existed in some of the cases. Two had previously had extensive

peritonitis from twisted pedicle. One had severe nephritis as a complication.¹

SUMMARY.

	CASES.	DEATHS.
Pelvic abscess	17	5
Extra-peritoneal abscess	1	1
Pyæmic intra-abdominal abscess	1	1
<i>Infectious.</i>		
Tubo-ovarian abscess	21	1
Pyosalpinx	6	0
Hydrosalpinx	2	0
Cystic ovary (pyæmic uterus)	1	1
Cystic ovaries (infectious)	3	0
Ovarian tumor	6	0
Myoma uteri	11	3

	CASES.	DEATHS
Hysterorrhaphy	7	1
Exploratory section	5	0
Inguinal hernia	1	0
Vaginal hysterectomy	4	0
Oöphorectomy for uterine myoma	2	0
Old sinus	1	0
Cholelithotomy	1	0
Cyst of kidney	1	0
Nephrotomy	1	0
Extra-uterine pregnancy	1	1
Abdominal hæmorrhage	1	0
Batley's operation	5	0
Tubercular peritonitis	1	1
	100	15

The Treatment of Diseases of the Uterine Appendages.*

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THE frequency and importance of diseases of the appendages is recognized by all practitioners of medicine. The early recognition of the same is of unusual importance, as by instituting proper treatment at once you save a large percentage of them from a major operation, and a prolonged convalescence.

We have learned a great deal about the subject of pelvic inflammation during the past few years, and experience has demonstrated that the majority of pelvic inflammations are diseased conditions of the tubes and

ovaries, caused by the extension of disease from the endometrium. This may be simple inflammation, tubercular, or specific (gonorrhœal).

Simple inflammatory conditions of the tubes and ovaries, before extensive adhesions take place, can be successfully treated by rest, boro-glyceride and iodine tampons, long-continued, hot-water douches, thorough curettement of the uterus, followed by a course of galvanism. I have cured a few cases where the ovaries were prolapsed and somewhat adhered by adding massage to the above treatment. But as a rule if the case has been neglected until pelvic peritonitis has occurred, with its tendency to adhesions and recurrence, you will

¹ This report ends with February, 1893.

² Read (by request) before the Mississippi Valley Medical Association, held at Indianapolis, Ind., October 4, 5 and 6, 1893.

save many years of suffering, if not life itself, by advising a removal of the appendages, after a sufficient trial has been given to the conservative treatment mentioned above.

Right here I class careful aseptic curettement a conservative measure. I allowed for a long time the "scare crow" never dilate or curette, where there is congestion or inflammation of the appendages, to prevent me from curing many cases. A great many cases of disease of the appendages are sympathetic, or extensions of disease from the endometrium. An active endometritis always means an enlarged, swollen, sensitive uterus, more or less prolapsed, and as long as it remains so you are only leaving a condition that acts directly upon the tubes and ovaries, and you will find them swollen and sensitive. After a rest in bed for a week, with long-continued hot-water douches, with elevation of the uterus by boro-glyceride tampons, I proceed to curette. The vagina is made aseptic, and extreme care is used with all instruments. In fact, as much care is taken as in making a laparotomy. I am particular to handle the uterus carefully, and avoid pulling it down to the vulva. If one cannot curette the uterine cavity without resorting to this violence he had better let it alone. With asepsis and gentleness you need not fear reaction or pelvic peritonitis following curettement.

Frequently in the puerperal state we have a pelvic peritonitis arise without affecting the tubes, the inflammation spreading directly through the uterus, there is an exudate formed, which rest and proper treatment will absorb, and leave the appendages healthy, so that later pregnancy takes

place, and the patient goes on to full term. Of course, in these cases, if suppuration occurs laparotomy should be advised.

Tubercular salpingitis is much more common than we are aware of.

In tubercular salpingitis the question of removal will depend wholly upon the amount of the general systemic infection. If the peritoneum is involved with ascites, removal of the appendages with drainage has had a wonderful effect in a great many cases. I could not advise it when complicated with pulmonary tuberculosis well advanced. In all these conditions the general system must receive the attention it urgently demands.

We come now to the last, but not infrequent, cause of diseases of the appendages, *i. e.*, gonorrhœa.

I believe that nearly all of the suppurative diseases of the tubes and ovaries are due to gonorrhœa. I am aware that I am liable to be challenged upon this statement, but my experience and observation has led me to this belief.

You are all familiar with the following history. You have treated a young man for gonorrhœa; he had a severe case, lasting several weeks, complicated with orchitis. After a time and much local treatment, he assumes to be well. You do not hear from him for several months, when he returns complaining of a recurrence of the discharge, after having had intercourse, or indulging in alcoholic liquors. This apparently subsides quickly under a little local treatment. The next time you hear of him is, perhaps, after several years have elapsed. He comes to you to consult you about his young wife, whom he

married but a few weeks ago. He tells you she enjoyed the best of health up to within a very short time, but now she is suffering from leucorrhœa, has smarting and burning pain during and after urinating, backache, pain in lower abdomen, chilly sensations; in fact, is sick and discouraged. You speak to him about his old trouble, and he tells you it has been well for years, with, perhaps, the exception once in a great while he had a "little gleet, but it went right away again." Ask him to urinate in a glass receptacle, and you find the feathery clouds, the "tripper faden" of the Germans. You examine his wife, and your suspicions are confirmed. She has a vaginitis, as well as an active endometritis, and tender appendages.

Now if active, thorough treatment is instituted you may avoid suppuration of the appendages. This patient should be put to bed, and made to remain there. A one to three thousand bichloride douche following the hot-water douche, of a half hour's duration, twice a day, after which the vagina is well dried, and thoroughly dusted with powdered boracic acid and aristol, equal parts, and the vaginal walls kept apart by aseptic non-absorbent tampons. This treatment faithfully observed for one week will so remove the more acute symptoms that curettement can be made. After curetting thoroughly I apply the compound of iodine freely to the uterine cavity. The patient should remain in bed ten days after curetting; she should be treated locally until every trace of the disease has been removed. I am sorry to say that we do not see these cases often until they are chronic, and suppuration has occurred, and we have an ovarian abscess, or a pyosalpinx, or both, to deal with. •

To my mind there is but one rational treatment for this condition, and that is removal, as early as you can get the patient in condition for operation. There is a limited number of cases of suppuration of the tubes that get comparatively well without operation (laparotomy). It is in those cases where the uterine end of the tube remains patulous, and you can drain through the uterus. I say comparatively well, for I have had but one marked case in my experience, and that occurred recently, and there has not yet sufficient time elapsed for me to be able to report her free from the liability to recurrences.

A young lady, about 30 years of age, single, came under my observation in February, 1893. She had been in bed for almost a month, suffering from severe pain in lower abdomen, chills, and some elevation of temperature. Her suffering was excruciating, and she required oft-repeated daily visits from her physician in order to obtain relief. The same day I first saw her, in sitting on the vessel to pass urine, a free copious discharge of pus passed from the vagina; this continued to discharge freely at every attempt at micturition for weeks, varying in amount from one to four ounces. I made an examination, and found the uterus fixed, os patulous, the vaginal vault resistant, and a large, boggy mass to the right of the uterus. From the discharge and examination, an abscess of the appendage was easily diagnosed. It was so large that I felt a cure could not be attained without an operation, laparotomy, and so informed the friends. I kept the patient quiet, secured free action of the bowels, and resorted to the long-continued hot-water douches. She gradually improved, and the daily

amount of pus discharged grew less. The patient was determined that she would never undergo an operation, but would submit to any local treatment and time required to bring about a cure.

The question of removal to my private hospital was now considered.

March 21. I called in a prominent gynecologist for his opinion and advice.

He made a careful examination, and was able to map out and feel a fluctuating mass to the right of the uterus, about the size of a large lemon. His advice was to follow out the present regimen, until patient improved more generally, and then if the local accumulation could be felt to have recourse to laparotomy. To summarize briefly, the case progressed rapidly, the size of the abscess as well as the amount of the discharge gradually decreasing. The uterus remained large, swollen, and tender, and the endometrium was so diseased that nothing short of curettement offered any prospect of a cure. On May 11, I curetted, contrary to the generally accepted doctrine, and removed a large amount of succulent thickened membrane. The progress now under galvanism was very rapid; was able to sit up in ten days; rode out June 1. General condition excellent, although right limb was lame, owing to the involvement of the genito-crural nerve.

No tenderness or thickening on either side of the uterus.

June 15. Uterus normal in size, and not sensitive. Much stronger in every way; color good.

June 20. Patient still improving; rides all over the city. To-day I told her that I thought her chances for a complete cure were very promising, and advised her to be very careful in every way for the next six months.

To my surprise she stated that she was to be married the next week, and was, thus spoiling the chances for a complete recovery in a case that was the most unpromising at the time I first saw her, of any I have ever met.

A few words in closing on the value of electricity in the treatment of the chronic inflammations of the uterus and appendages. I value this agent highly, and in the catarrhal forms of endometritis in young girls and primiparæ you can obtain a cure if sufficient time is given.

I apply the positive pole intra-uterine, and the negative in the form of a broad electrode over the whole lower abdominal region. Use a current strength of from twenty to fifty milliamperes for five minutes, every third day. It will require from fifteen to twenty applications to complete a cure.

As a diagnostic aid in determining if pus exists in the appendages, I esteem it highly, and have not yet been disappointed. In a case of doubtful suppuration when you are quite sure you have an inflammatory condition you can determine by inserting the positive intra-uterine electrode to the depth of one inch in the uterine cavity, and the broad abdominal electrode (negative) over the lower abdomen. Turn on the current gradually until you have a strength of from forty to fifty milliamperes.

If the patient is over-sensitive to the current, and complains of great pain, which persists for several hours after its application, you have a case of suppuration. If inflammation or congestion is present there will be a sense of relief, which will continue for a day or two after the application.

In all these treatments extreme cleanliness must be observed.

The Results of Vaginal Hysterectomy.

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NEW YORK.

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AN operation must be judged by its results. While in the last few years reports of a large number of cases of vaginal hysterectomy have been published, yet the results recorded have apparently not been sufficiently favorable to convince all surgeons that the operation is comparatively safe and satisfactory. For instance, it is claimed by some excellent gynecologists that in cancer of the uterus high amputation is attended by better results, and of course with less danger, than is vaginal extirpation. There can be no question but that in many cases high amputation has been followed by most excellent results. I have recently seen two patients on whom this operation had been done, respectively seventeen and thirteen years ago, who have no sign of relapse. In both cases the operator was Dr. T. G. Thomas, and the diagnosis of carcinoma was confirmed by the microscope.

Vaginal hysterectomy, however, as a recognized surgical procedure is of recent date, and, while a sufficient number of cases have been recorded for us to form a just estimate of its mortality and of the relative proportion of patients who are well two years after operation, yet we have records of only a comparatively small number of patients who have been followed for five years or longer. It is from this latter class of cases that

our conclusions must be drawn as to the proportion of radical cures effected. The dangers of extirpation must, of course, always be greater than those of high amputation. I think it has already been shown that the results of extirpation are more favorable, as regards length of life after operation, than are those of the less radical operation, and as time advances, cases are accumulating in favor of hysterectomy, and that in spite of the fact that this operation is done on many patients who would have been declared inoperable, were high amputation the only surgical means at our disposal. It is important that all cases should be published, and especially those which have been watched for a number of years. The longer the list, the more correct will be our conclusions. It is difficult to follow hospital cases for many years, yet if operators would take pains to hunt up all patients operated upon four years ago, or longer, and report on their condition, a comparatively just estimate of the average number of radical cures could be reached. The mortality of the operation may be estimated at about 10 per cent. Winter reckons 8.4 per cent in 474 operations. Krukenburg reckons the mortality of 15 per cent. in 243 cases operated on at the Berlin Frauenklinik.

The main object of this paper is to

record the personal results of the author. No new methods are recommended, and no new instruments are presented. The operations are classed as: (1) For cancer; (2) for prolapse.

FOR CANCER OF THE UTERUS.

All the cases of vaginal hysterectomy, which the author has ever done are reported, and they cover a period from August, 1888, to September, 1893.

Operations 16.

Deaths 0.

Fifteen of these patients have been followed. One has disappeared from view. Of the fifteen who have been kept under observation, there are at the present time (August, 1893) in good health and perfectly free from malignant disease:

5	years after operation,	1	patient.
4	" " "	2	patients.
2	" " "	3	"
1½	" " "	4	"
1	" " "	6	"
½	" " "	8	"

Less than 3 months after operation, 12 patients.

There have died from return of the cancer, at the end of thirty-three months, one patient; at the end of seven months, one patient. There are alive, but with return of the cancer, either locally or in other organs, three years after operation, one patient; one year after operation, one patient.

We thus see, that out of the sixteen patients operated on, four have had a return of the disease. Unfortunately, this will not be the final ratio, for, with the exception of patients who are in perfect health at the end of five years and four years after operation, the cases have not been followed for a sufficiently long time to warrant any decided opinion as to their chance for cure. I will mention

in this connection, two other patients with carcinoma of the body of the uterus, who were operated on by the combined vaginal and abdominal methods. One of these cases, on whom I operated more than four years ago (fifty months), had a uterus as large as at three months' pregnancy; she is at present in perfect health, with no sign of relapse. The other patient operated on two and one-half years ago, is also in good health, with no trace of malignant disease. Four years, at least, must elapse before we can pretend to regard a patient as cured. Indeed, a number of relapses have been reported after the extirpation of more than four years. I have recently seen a patient, who at four and a half years after extirpation was apparently free from disease (the operator was Dr. T. G. Thomas), six months later, however, cancer recurred in her pelvis and she died in another half year. Still, such late relapses are uncommon, and if a patient is well at the end of four years, we can feel comparatively safe in predicting that there will be no return of the original growth. I have extirpated the uterus for cancer by various methods twenty-one times; at the end of more than four years, three of these patients, and at the end of two years, five, are well and entirely free from return of the cancer, as far as can be determined by a personal examination. At the end of one year, nine patients are apparently perfectly well.

Where extirpation has been possible I have always chosen this operation in preference to any other. I consider that a case is unsuitable for vaginal hysterectomy, if either the broad ligaments or bladder is infil-

trated with cancer. If a uterus is more than double its normal size, I consider abdominal hysterectomy the safer operation.

Before reporting the history of the vaginal cases, I will briefly describe my method of operation. It is unwise, I think, to lay down any special plan which must be followed in every case. The details of the operation must constantly vary both in the manner of their execution and in their sequence, according to the peculiarities of the case. My general plan, however, is as follows: The patient is placed in the lithotomy position, with the buttocks elevated on a hard pillow. The vagina, vulva and neighboring parts are cleansed in the usual surgical manner, and rendered as nearly aseptic as possible. A Sims' or a modified Simon's speculum is used to draw down the posterior vaginal wall and perineum. If there is any cauliflower growth from the cervix, it is scraped off by the spoon or sharp curette. Any ulcerated surface is cauterized with the Paquelin cautery. After a fresh scrubbing with 1 to 1000 bichloride solution, the cervix, if any remains, or the edge of the vagina is seized with vulsella forceps, and the uterus dragged downward toward the vulvar orifice. The anterior vaginal wall, with the bladder, is then dissected by scissors from the cervix, the incision being made at least half an inch away from the edge of the cancer. The separation of the anterior wall of the uterus from the bladder and vagina, as far laterally as the broad ligaments, is then completed up to the peritoneum which, as a rule, is not opened at this stage. The posterior vaginal wall is then separated, and the peritoneal cavity

freely opened in Douglas' pouch. A finger can now be passed in behind the broad ligaments, and with another in front, they can be easily palpated, and their exact condition determined. If the edge of the vagina bleeds, the hæmorrhage is controlled best by a running catgut suture. The lower part of each broad ligament (perhaps a fourth of the entire length) is then secured, generally with a ligature, and that part of the ligaments cut loose from the uterus. That organ will generally then be considerably freed, and can be pulled lower down. The next portion of each ligament is then secured and cut in a similar manner. Either before or after this, the peritoneal cavity is freely opened over the anterior part of the fundus. This can generally be done by tearing with the finger, though sometimes the peritoneum is so tough that a sharp instrument is needed to make the opening. The upper portions of the ligaments are then secured and cut, and the uterus is free. It is often easier, at the upper part of the ligaments, to tie (or clamp) on one side only, and, cutting the uterus free on this side, drag the organ outside the vulva, where the remaining side of the ligament can be secured. After the uterus has been removed, careful inspection is made to ascertain if hæmorrhage has ceased. Occasionally a few bleeding points need a catgut ligature, and sometimes the ligatures on the broad ligaments need to be re-applied. If the ovaries and Fallopian tubes appear healthy, they are not disturbed, unless they fall downward into the opening, in which case they are removed. If the adnexæ, however, are infiltrated with inflammatory or other material, the ovaries

and tubes are removed, and as much as possible of the ligaments. After a vaginal hysterectomy, in most of my cases, I have sutured the peritoneum to the cut edge of the vagina. This is done partly to stop the oozing of blood from the cut edge of the vagina, and partly to cover up the raw bleeding surface which remains between the vagina and peritoneum. I think it is a good rule to follow, though in the few cases where this detail has been omitted, no harm has resulted. In only a few cases have I closed the peritoneal cavity by sutures. There may be some advantage in this, but I have not found it to be necessary. The stumps of the broad ligaments are drawn gently downward, and a roll of iodoform gauze is placed in the opening, extending up to the peritoneum, but not inside the cavity. A pad of sterilized gauze is placed over the vulva, which is renewed as often as may be necessary. The iodoform gauze roll is removed on the fifth or sixth day, and the vagina gently irrigated. The patients, as a rule, are out of bed by the fourteenth, often by the ninth day. The temperature has, in two or three of the patients, risen on the fourth and fifth days to 101° , but in the other cases it has never risen above 100° . As a rule, very little shock has followed the operation, and but little pain is experienced.

As stated before, this plan is often altered. Sometimes it is easier to begin the separation behind; sometimes better access can be gained to the broad ligaments by tipping the fundus forward or backward.

Shall the broad ligaments be secured by clamps or ligatures? As a rule, I prefer ligatures. In some cases

they can be applied without much difficulty. In certain cases, however, where the uterus cannot be drawn freely downwards, or where it is necessary, on account of the patient's condition, to adopt the most rapid method, clamps are preferable. The use of clamps is followed, I think, by more pain, and, perhaps, necrosis of more tissue than is the case where ligatures are employed, but these disadvantages may be trivial, when compared in certain cases with the greater safety and rapidity with which clamps can be adjusted. The ordinary clamp used in abdominal work, with a long, curved, biting surface and short handles, is all that is needed. They are removed at the end of thirty-six or forty-eight hours.

I think, however, that ligatures are to be preferred, and there must be very few cases where they cannot be applied. I pass them threaded in a full-curved, rather short, but heavy needle, held in an ordinary needleholder. In most of my cases I have employed silk for ligation of the broad ligaments. I never feel quite secure after the ligation of considerable masses of tissue with catgut, and always think that there is greater liability for the knot to loosen, and for portions of the pedicle to draw out. It may be prejudice, but I am always better satisfied when the broad ligaments have been ligated with silk, and, as more tissue can be embraced by the ligature, fewer are needed, and time is thus saved. I have seen no great disadvantage in the use of silk. In a very few cases (three out of sixteen) it has acted as a foreign body, and after the lapse of a few weeks, has produced a certain amount of vaginal discharge. If left alone, these

ligatures would probably have come away of themselves, but it is a very simple matter to introduce a speculum, grasp the ligatures in a pair of forceps, and by a gentle pull they will slip off almost painlessly and the patient will be at once rid of this petty annoyance. As a rule, however, no inconvenience has been experienced from the use of silk.

It may be of interest to mention that the great majority (80 per cent.) of these operations were done in the public operating room of a large general hospital, and remained in the common ward with the usual variety of cases, septic and aseptic, which collect in a public hospital.

CASE I.—Married; multipara, aged 49. Cancer of cervix extending to internal os; operation in August, 1888; cauliflower growth burned off by Paquelin cautery; broad ligaments secured by clamps (five); no suture of peritoneum; patient sat up on fifteenth day; examined July, 1893; no trace of disease in the pelvis, and general condition excellent.

CASE II.—Married; multipara, aged 53. Cancer of cervix, involving edge of vagina; operation in Cancer Hospital, August, 1888; broad ligaments secured by clamps (six); in September, 1891, return of cancer in apex of vagina; death, June, 1892.

CASE III.—Married; multipara, aged 42. Cancer of fundus, involving entire uterine body down to internal os. Operation, May, 1889, in Presbyterian Hospital; broad ligaments secured by clamps; patient sat up on twelfth day; examined, July, 1893; no return of disease; general health perfect; weight, 225 pounds.

CASE IV.—Married; multipara, aged 39. Cancer of cervix; opera-

tion, July, 1890, in Presbyterian Hospital; lower part of broad ligaments secured by ligatures, upper part by clamps. In November, 1892, return of disease; alive in July, 1893.

CASE V.—Married; multipara, aged 43. Cancer of cervix; operation, April, 1891, in Presbyterian Hospital; broad ligaments secured by clamps and ligatures; patient sat up on fourteenth day; has disappeared from observation, but was free from disease three months after operation.

CASE VI.—Married; multipara, patient of Dr. W. C. Walker. Cancer of cervix and posterior wall of vagina, extending downwards toward the vulva for two and a half inches. The entire thickness of the posterior vaginal wall was infiltrated with cancer, a roundish area, two and a half inches in diameter, being involved; operation, October, 1891; the uterus was first removed, both ligatures and clamps being used; the entire posterior vaginal wall was then removed from its upper end to a point just above the posterior commissure. It was more or less adherent to the rectum, and, at several points, the rectal wall was partly torn, leaving intact the mucous coat alone. A great part of this separation was done while one finger was in the rectum; the patient lost a considerable amount of blood; the operation lasted one and three-quarter hours; she rallied well, however, and was out of bed on the twenty-first day. In July, 1893, she has no return of the disease.

CASE VII.—Married; multipara, aged 32. Cancer of the cervix; the vagina and broad ligaments were apparently free from disease; operation, June, 1889, in Presbyterian Hospital; both ligatures and clamps were used;

patient had a rapid convalescence, but disease returned in four months, and, the patient being desirous of another attempt at cure, laparotomy was done in October, 1891; a cancerous mass was removed from the cicatrix, at the apex of the vagina, but the intestines were found infiltrated, and the pelvic glands involved; no attempt at radical removal of the disease was made; the abdomen was closed, and the patient made an uneventful recovery; she died four months later, in February, 1892.

CASE VIII.—Married; multipara, aged 47. Cancer of cervix; operation, July, 1891, in Presbyterian Hospital; broad ligaments were tied with silk ligatures; patient out of bed on the twelfth day; examined in July, 1893, and no sign of the return of cancer, and condition good.

CASE IX.—Married; multipara, aged 49. Cancer of cervix; operation, July, 1892, in Presbyterian Hospital; ligatures; examined, July, 1893; no return of cancer, and general health excellent.

CASE X.—Married; multipara, aged 51. Cancer of cervix; operation in Presbyterian Hospital, July, 1892; ligatures and clamps; the left broad ligament was found to be infiltrated, and was in part removed; patient had always been known as a "bleeder;" and a great deal of oozing of blood followed the operation, which required a large number of ligatures and circum-suturing; patient, in July, 1893, is in very low condition from cancer of the stomach, and other abdominal viscera.

CASE XI.—Married; multipara, aged 39. Cancer of cervix; broad ligaments secured by ligatures; operation, June, 1892, in Presbyterian

Hospital; patient examined, July, 1893; no sign of return of cancer, and health good.

CASE XII.—Married; multipara, aged 42. Cancer of cervix, and of lower half of uterine body and edge of vagina; operation, March, 1893, in Presbyterian Hospital; broad ligaments secured by ligatures; sat up on tenth day; examined, August, 1893; no sign of return of cancer; patient has gained twenty pounds in weight.

CASE XIII.—Married; multipara, aged 43. Cancer of cervix and of lower part of fundus; operation, March, 1893, in Presbyterian Hospital; broad ligaments secured by ligatures; patient examined, August, 1893; in perfect health; no return of cancer.

CASE XIV.—Married; multipara, aged 39. Cancer of cervix; operation in Presbyterian Hospital, August, 1893; broad ligaments secured by ligatures (catgut); patient out of bed on eleventh day.

CASE XV.—Married; multipara, aged 42. Cancer of cervix; operation in Presbyterian Hospital, August, 1893; broad ligaments secured by silk ligatures; patient out of bed on twelfth day.

CASE XVI.—Married; multipara, aged 39. Cancer of cervix and edge of vagina; operation in Presbyterian Hospital, August, 1893; broad ligaments secured by silk ligatures; a cylinder of vagina, an inch deep, removed from upper end, and the peritoneum sutured to the cut edge; patient out of bed on the eleventh day.

The above record comprises all my cases in vaginal extirpation for cancer. In certain other cases, I have

started the operation with the hope that the entire uterus could be extirpated, but have been forced, on account of the involvement of bladder or broad ligaments, to limit myself to high amputation.

While there are a certain number of these cases suitable for abdominal hysterectomy, I have never seen one which, in my opinion, was suitable for sacral hysterectomy. There may be exceptional cases, but my experience with the operation has led me to the conviction that, when a uterus cannot be removed by the vagina or abdomen, it is better to refrain from any radical operation. By sacral operations I mean any of the methods by which the uterus is removed through the back, whether by sacral resection, or perineal incisions. The same argument does not apply to cancer of the uterus and of the rectum. In excision of the latter organ, even if the disease is not eradicated, the danger of intestinal obstruction will probably be removed. In cancer of the uterus no such danger threatens the patient.

FOR PROLAPSE OF UTERUS AND VAGINA.

In ordinary cases of prolapse of the uterus, even where complete, the plastic operations usually adopted in such cases (perineorrhaphy and colporrhaphy) are, as a rule, adequate to effect a cure. In such patients, more serious operations, as vaginal hysterectomy, or abdominal hysterorrhaphy, are unjustifiable. There are certain cases, however, of complete prolapse of uterus and vagina, which the minor plastic procedures are utterly inadequate to cure. Such cases are found among working-women, where a large

uterus and an enormously hypertrophied vagina hang constantly outside the vulva, and have so hung for many years; the bladder has been dragged completely outside, the rectum has been pulled downward so as to be almost doubled on itself, and the pouches behind and in front of the uterus are filled with intestines which slip downward and upward, according to the position of the patient. In such patients the vagina has apparently been the main factor in the prolapse, for it is very much lengthened, widened, and its muscular and cellular tissue enormously increased, the wall being often an inch in thickness. The prolapsed mass may be as large as the adult head, and sometimes it is irreducible. Perhaps, among private patients, who can and will take good care of themselves, the combination of perineorrhaphy, colporrhaphies (and Alexander's operation), with the wearing of a pessary afterwards, may nearly always render such patients comfortable. In working-women, however, who neglect themselves, and are obliged to lift and carry heavy burdens, such operations are, in my experience, almost invariably attended by failure. When the patient leaves the hospital, a brilliant cure has apparently been effected, and at the end of three months the cure may still persist, but in another three months, or in a year, the condition of these unfortunate women is generally as bad as before operation. I know that this is a strong statement, and is directly opposed to the statements of some of our prominent gynaecologists, men for whose opinion I have the greatest respect, but I simply state my own conviction, and one which has been partly formed

from observation of patients who have been operated on by these same surgeons who maintain that the plastic procedures suffice in every case.

If the plastic operations on vagina and peritoneum will not cure such patients, to what other procedures can we resort? Will vaginal hysterectomy be sufficient, or is abdominal hysterorrhaphy the more satisfactory operation? I consider that either one is justifiable in such conditions. In my experience vaginal hysterectomy *alone* is not sufficient to effect a lasting cure. When reinforced by a perineorrhaphy and colporrhaphy, it may give satisfactory results in most cases, but extirpation alone, without the aid of the minor procedures, has, in my experience, been followed by failure in nearly all cases.

Six patients whose uteri have been extirpated for the cure of aggravated prolapse, have come under my observation. Four of them have been operated on by myself, the other two by able surgeons of this city. In three out of the six the hysterectomy has been reinforced by perineorrhaphy or colporrhaphy. One patient alone has been satisfied by the result obtained. In this case I removed the entire posterior vaginal wall, and built up the perineum. In two patients the result may be classed as a partial success; in one of these, hysterectomy alone was done; in the other a perineorrhaphy was added (both cases were operated on by the author). In three cases the result has been a failure and the patients are little better off than they were before operation. In each patient, at the end of the year, a large mass protruded from the vulva, of the size and character of the original tumor, only

minus the uterus. In one of them (operation by the author) hysterectomy alone had been done; in another perineorrhaphy, and in the third, lateral colporrhaphy had been added. In the last-mentioned case, at the end of eight months, the woman's condition was so wretched that she begged for further operative relief, and, in response to her appeal, I opened the abdomen (patient in Trendelenburg's posture) and with considerable difficulty drew the cicatrized apex of the vagina up into the abdominal wound, and in that situation carefully sutured it to the peritoneum and recti muscles, covering it over with external oblique muscle and skin. At the end of six months the result was highly gratifying; the vagina was still somewhat roomy, but there was no sign of cystocele, rectocele or protrusion outside the vulva. The patient was comfortable and happy. The result in this patient has been so satisfactory that I have persuaded one of the other cases of failure to undergo the same operation.

A short record of four cases operated on by myself, as follows:

CASE I.—Married, multipara, aged 42. Prolapse had existed for twelve years. Perineorrhaphy and presumably colporrhaphy had been done on her four years previously in one of our city hospitals. The prolapsed mass had been irreducible for six months. It was the size of the crown of an ordinary Derby hat, extending outside of vulva to a length of twelve inches, measurement across (circumference) nineteen inches. Reduction impossible even after two weeks' rest in bed, ice bags, etc. Operation July, 1891. Uterus extirpated, posterior vaginal wall reduced in size, and a

perineorrhaphy added. This patient died a few months after the operation from kidney and heart disease, and may be classed as a partial success, though, had she lived longer, would have been classed, I think, as a failure.

CASE II.—Multipara, aged 38. Prolapse which had existed for ten years; about the same size as Case I, but reducible. Uterus extirpated in July, 1891, and almost the whole of the posterior vaginal wall removed (weight of vaginal tissue, ten ounces). This left a large triangular gap, the edges of which were united, and a high perineum was formed to partially close the outlet. This patient, at the end of two years, has still a very voluminous vagina, but there is no prolapse, and I consider the result satisfactory.

CASE III.—Multipara, age 39. Prolapse for fourteen years, the size of a large cocoanut. Operation August, 1892, in Presbyterian Hospital. Uterus extirpated. In six months the patient was as uncomfortable as before operation, and the case may be classed as a complete failure.

CASE IV.—Multipara, aged 41. Prolapse for nine years, as large as in Case I. Patient had, on two previous occasions, submitted to operations for cure of her trouble. Uterus extirpated in March, 1893. At the end of five months the prolapse has partially returned, and doubtless will have fully returned in another three months. So convinced is the patient of this, that in October she means to re-enter the hospital for an abdominal elytrorrhaphy.

Of the two patients operated on by other surgeons, both are dissatisfied with the result, and refuse further operative interference on account of

the unsatisfactory result following their first attempt.

The details of the operation do not essentially differ from those of hysterectomy for cancer, except that the whole procedure is performed outside the vulva. The operation, however, is somewhat tedious and is attended by considerable loss of blood. When the uterus is removed an enormous raw surface remains, consisting of the inner surface of the vagina. This surface continues to bleed persistently and the blood-vessels seem to have very little contractile power. In spite of numerous ligatures, the oozing persists even after pressure by clamps, sponges, gauze, etc., have been exerted for some time. I do not refer now to the broad ligaments, which, of course, have been tied in the usual manner, and cause no trouble but to the free capillary and venous hæmorrhage from the spongy surface of the vagina, out of which the uterus has been dissected. I have found that an attempt to stop this by means of ligatures was endless, and that the best means for its control was a continuous catgut suture. A comparatively small area of vagina is dissected off the uterus by scissors, and a needle threaded with fine catgut is carried out and in, just under this bleeding surface, and a complete circum-suture of the area is made. Then a further dissection and another line of suture, and so on until the uterus is free. In one of my patients, even by this method, I could not completely stop the hæmorrhage, and I was compelled, after wasting considerable time, to fold the vagina inward on itself, bringing one bleeding surface against the other, and there suture them together around the entire cir-

cumference. On account of this tendency to bleed, the operation is somewhat tedious, and should not be practiced on weak patients.

It may be that a larger experience may modify my views, but at present

it is my judgment that vaginal hysterectomy for the cure of aggravated prolapse is an unsatisfactory procedure, and that, as a rule in such cases, abdominal hysterorrhaphy (hystero-pexy) is the preferable operation.

The Present Status of the Treatment of Uterine Fibroids.

BY X. O. WERDER, M.D.,
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UTERINE fibroids differ clinically from the growths originating in the ovaries in that they are not necessarily fatal, as are the latter, becoming dangerous to life principally by complications to which they very frequently give rise. The treatment is, therefore, not uniform, as in the case of ovarian tumors, where the only safety for the patient lies in their safe removal. It is greatly influenced by the nature and seat of the tumor, by the symptoms produced and by the condition, and frequently also by the age, of the patient; for it is a long-recognized fact that many of these neoplasms cease to be a source of danger after menopause has become fully established. No hard and fast rule can, therefore, be laid down for the treatment of these cases. On the contrary, the conscientious practitioner must learn to individualize; he must use his best judgment and be guided by the conditions found in the particular patient before him. A large percentage of cases will probably require no treatment, as the tumors are not accompanied by any symptoms and are not affecting the health

of the patient. Among these are especially the small subperitoneal and pedunculated fibroids. Others are amenable to symptomatic treatment which, while not producing an anatomical cure, relieves their serious complications and places the patient in a condition to enjoy life in spite of the presence of the neoplasm. Many, however, are such a serious menace to life and health that only the resort to operative measures gives promise of permanent relief. For the sake of convenience, I will, therefore, divide the subject of the treatment of uterine fibroids into two paragraphs, the *symptomatic* and the *radical treatment*, and will confine myself to those views which seem to be generally accepted by the leading and unbiased authorities of the present day.

SYMPTOMATIC TREATMENT.

The principal symptoms produced by uterine fibroids requiring our attention are hæmorrhage and pain. Hæmorrhage is one of the most constant and dangerous complications, and is due to a diseased and hypertrophied condition of the uterine mucosa and hyper-

plasia of the blood-vessels (Wyder), or according to the later researches of Semb,¹ to a hypertrophy of the uterine muscles accompanying the growth of the myoma with a simultaneous hyperplasia of the blood-vessels. Among the medicinal agents ergot still claims first rank as a uterine hæmostatic, though it is less persistently and energetically used than a few years ago, when the profession was still under the influence of the enthusiastic claims of Hildebrandt. That it frequently and often promptly controls hæmorrhage we are willing to admit, and that by inducing powerful uterine contractions it often produces a temporary diminution of the size of an interstitial fibroid, we can scarcely deny, but complete cures by its administration, ever so long continued, must certainly be regarded as extremely rare. Its best effects are obtained in small interstitial fibroids, especially near the menopause, when it is sometimes able to tide the patient safely over that period. Submucous fibroids are occasionally atrophied by its use, or it may cause their intrusion into the uterine cavity, where they can then be removed as ordinary polypi. Second only to ergot is hydrastis *Canadensis*, which often proves of value in bleeding fibroid tumors. While ergot influences the unstriped muscular fibres of the uterus, hydrastis seems to confine its action to the small vessels of the uterine mucosa, which it causes to contract. In 1890 Falk introduced hydrastinin, prepared from hydrastin, an active principle of hydrastis *Canadensis*, for which he claims very marked results in uterine hæmor-

rhage, whether due to myoma or other diseased conditions of the uterus. Czempin and others also speak very highly of it. He administers it in doses of 0.025 (one-fourth grain) in capsules or subcutaneously four times a day, six to eight doses usually being sufficient to produce the desired effect.

Other medicinal agents which from time to time have been recommended in the treatment of uterine fibroids scarcely deserve mention, as they are absolutely valueless. Reported cures effected by them have probably been merely coincidences. The agent which during the last few years has given rise to the most animated discussions in our medical societies, and in not a few instances to very bitter controversies in connection with the subject now under treatment is *electricity*.

Introduced to the profession by Apostoli, about eight years ago, its true worth has by this time been sufficiently tested to allow of a critical survey of its real status obtained in the hands of competent and unbiased observers. The enthusiastic claims of Apostoli and his followers have only been partially verified. That it is a valuable agent to stop hæmorrhage and also pains in certain forms of uterine fibroids is generally admitted; but that it checks the future growth of the tumor, causes its shrinkage and often its entire disappearance, are claims not borne out by our present experience. At a meeting of the Berlin Gynæcological Society, held over a year ago, in which the subject of the treatment of uterine fibroids by galvanism was discussed, A. Schaeffer reported forty cases treated by him at Veit's clinic; P. Broese, thirty-five cases; N. Nagel,

¹ Archiv. für Gynäkologie, Vol. XLIII.

thirty-two cases under treatment at Gussierow's clinic, and A. Mackinrodt, A. Martin's assistant, thirty-six cases, making a total of 143 cases. The treatment carried out was strictly according to Apostoli's directions, dosage from 70 to 240 milliampères, depending on the susceptibility of the patients, the applications lasting from five to ten minutes and the length of treatment from six weeks to six to eight months. Of this large number of cases only one, a tumor of the size of a fist, was perfectly cured (P. Broese); another tumor of the submucous variety was expelled from the uterus after intra-uterine galvanism (A. Schaeffer). P. Broese reported three with considerable diminution in size, one of which shortly after cessation of treatment regained almost its former dimensions. A. Schaeffer, Nagel and Mackinrodt were less fortunate, as they distinctly state that in none of their 107 cases did they notice any appreciable diminution in size. They all agree that as an agent to relieve symptoms generally accompanying these neoplasms, such as hæmorrhage and pain, galvanism proved beneficial in from 60 to 70 per cent., but relapses were frequent among those relieved; 30 to 40 per cent. were either not relieved or made worse. I regard this report of special interest bearing on the electrical treatment of uterine fibroids on account of the unusually large number of cases observed by very competent and unbiased men, and because of the opportunity of careful observation at the clinics at which these cases were treated. My own limited experience coincides with the observations above given. While I have seen symptomatic improvement follow the use of

galvanism in about half of the cases treated, I have never seen any permanent shrinkage; on the contrary, in three cases the tumors continued to grow while under treatment, and one which at the time of treatment was of the size of a small lemon, had attained the size of a cocoanut a year after electricity had been discontinued.

In looking over the literature of the subject I was greatly surprised to find how many men, formerly enthusiastic disciples of Apostoli, have grown lukewarm in their master's faith, or have abandoned it entirely. Nevertheless the fact remains that in a certain number of uterine fibroids, particularly in small interstitial and subperitoneal growths accompanied by hæmorrhage, we have in the intra-uterine positive electrode a very valuable remedy, by means of which many patients will be able to enjoy life and comfort, and if near the menopause will be safely tided over that period. In large tumors, interstitial or subperitoneal, we will frequently be disappointed by its use, and in the pedunculated and submucous nothing is to be expected from it; in the latter variety it is, indeed, liable to do harm by causing suppuration and sloughing of the growth. In the œdematous and fibrocystic tumors it is absolutely contra-indicated. If used in these selected cases it will rarely fail to relieve the urgent symptoms, though he who expects it to accomplish more will be sadly disappointed.

Reports of cases of shrinkage of fibroid tumors during the electrical treatment are, no doubt, almost invariably based on faulty observations, for it is a well-known fact that myo-

matous tumors frequently enlarge under the stimulus of the menstrual molimina, and decrease after the subsidence of the menstrual congestion; this fluctuation in size often being quite considerable. It can easily be imagined how the shrinkage following these physiological congestions may oftentimes be mistaken for the result of the electrical treatment. Then, again, measurements undertaken for the purpose of ascertaining the effects of the treatment are only too often deceptive; if external, they necessarily must vary according to whether the intestines are distended or empty; uterine measurements are equally fallacious, especially when the uterine cavity is deep and capacious. The sound may be arrested by folds of the thickened mucosa, or it may penetrate to the fundus uteri in a straight line, and the next time may deviate to one or the other cornu, making a possible difference of a half to two inches.

The *modus operandi* of the galvanic current, at first shrouded in considerable mystery, is now pretty well understood, and we recognize that whatever effect the interpolar action of the current may have, we owe the beneficial results obtained principally to the direct caustic action of the intra-uterine electrodes on the mucosa. The experiments of Prochownick and Spaeth on the dead and living uteri not only corroborate the statements of Apostoli and others in regard to the different chemical action of positive and negative pole, but they have also demonstrated conclusively that the immediate action of both is to destroy the uterine mucosa wherever they come in contact with it (the positive pole, other things being equal,

being more intensely caustic than the negative), and to cause coagulation in the lymph and blood-vessels in the structures underlying the mucous membrane, the depth depending on the intensity and duration of the application; this may later be followed by necrosis of the tissues involved. The structures beyond those in which the changes described occurred presented nothing abnormal either macroscopically or microscopically. From this follows, that, after repeated positive intra-uterine galvanism, a *restitutio ad integrum* of the uterine mucosa is not to be expected, but that it results in the destruction of its epithelial elements with increased connective tissue formation, and finally cicatricial tissue supplanting the uterine mucous membrane. This can be demonstrated clinically; not infrequently the first few applications are followed by slight hæmorrhages, which are caused by reactionary hyperæmia around the slough. Again, we all have experienced how slowly cases with large uterine cavities respond to galvanic treatment; it is because it takes a much longer time to destroy the mucosa over a large surface than over a small one. These are all observations which go to show that it is not the interpolar action of the electrical current, or electrolysis in the strict sense of the word, not even its stimulating effect on the contractile tissues of the uterus and neoplasm, though I am willing to assign to the latter a certain rôle in some cases, but that it is the polar or caustic effect produced by the intra-uterine electrode, on which depends its therapeutic influence. This action may even explain a certain amount of shrinkage of the tumor

in the rare cases where such actually occurs, as it is but reasonable to suppose that the destruction of such a large vascular surface as the hypertrophic uterine mucosa might affect the nutrition of the neoplasm to a considerable extent.

The relief of pain which undoubtedly follows galvanic treatment in a considerable number of cases, though by no means as frequently as that of hæmorrhage, is usually attributed to that mysterious interpolar action of the current. Pain may be due to pressure on neighboring organs, diseased adnexa, adhesions, etc. When pain is relieved by electricity, however, its most frequent source, I believe, has been the uterine mucosa, which is nearly always diseased in a myomatous uterus. That intra-uterine galvanism should be able to relieve pain of this character can, at least, be assumed from the study of its effect on that structure, but that it should be equally effective in pressure pains, pains from diseased adnexa, or caused by adhesions, is, in my mind, more than doubtful. I have good reason to question its utility as an absorbent of adhesions, as I have applied electricity patiently and persistently in a number of cases of retroflexed adherent uteri with the result that it became necessary to open the abdomen to release the bound-down uterus and its adnexa.

I have not referred to galvanic puncture because I regard that as dangerous as the radical treatment, *i.e.*, hysterectomy, in skilled hands, while it is incomparable with it in its results.

A favorite means of checking hæmorrhage is the curette, with or without subsequent injections of iodine; the latter method being that

so highly recommended by Max Runge and others who have certainly achieved excellent results by it. Curettement alone is a measure of scarcely more than temporary utility on account of the well-known property of the uterine mucosa to rapidly regenerate itself. While it is more certain and prompt in its effect than electricity it is less permanent, at least when the latter is used perseveringly, from the fact that the intra-uterine electrode destroys all epithelial elements, preventing the regeneration of the mucosa and substituting for it cicatricial tissue. It is, however, of the greatest benefit as a preliminary operation to hysterectomy when the patient has, from long-continued loss of blood, become so exsanguinated as to make a more radical operation for the time extremely hazardous. It allows the patient to recuperate and to regain sufficient strength to bear the more serious radical operation. In several very anæmic cases I have preceded the application of electricity, which I feared would be too slow to affect the serious hæmorrhage, by a thorough curettement, with very satisfactory results. I have always found the curette a perfectly safe instrument, even in myoma, when used with care and scrupulous aseptic precautions.

Whether the operation first performed by Franklin Martin, and simultaneously recommended on theoretical grounds by Gottschalk, based on his researches in the "Hystogenesis and Etiology of Uterine Myomata,"¹ of tying both arteries and a portion of the broad ligaments, will prove to be more than a symptomatic

¹ Archiv. für Gynækologie, Vol. LXIII.

cure, and whether it will always bring about such a result further experience will show. This ingenious operation, as it certainly seems based on sound principles, deserves further trial in cases where a more radical operation is contra-indicated.

RADICAL TREATMENT.

There are many sufferers from myomata who, of necessity, will apply to the surgeon for relief, either because palliative measures were tried in vain, or because the social condition of the patient does not allow her to spend months of her valuable time under medical treatment, or because the nature of the tumor from the outset is one unsuited for any other but operative treatment.

The operation for the removal of fibroid growths has, until very recently, been attended by a frightful mortality, which had a very disparaging effect on its performance. For this fatality was responsible not only the faulty technique, but even more so the delay in operating, based frequently on the erroneous idea, prevalent even at the present day, that uterine fibroids are innocent tumors which, when safely tidied over the menopause, would become harmless. While this is no doubt true in the majority of cases, recent observations have shown the fallacy of these expectations in not an inconsiderable number of cases. Not only is the menopause unduly delayed, often far beyond the physiological limits, by these neoplasms, but we know that even after the climacteric period is safely reached they do not always shrink, but not rarely undergo certain changes, of which I will mention cystic and malignant degeneration, which always lead to a fatal termina-

tion unless the tumor be removed. Another danger of fibroid tumors to which attention has frequently been called, very recently again by Leopold and Hofmeier, is muscular degeneration of the heart in consequence of long-continued loss of blood, which not only places the life of the patient in constant jeopardy, but is almost sure to lead to a fatal termination, often on the operating table, if an operation is attempted. Again, inflammation and suppuration of the tumor may develop or it may reach such enormous dimensions as to become a danger to life. Operations in such cases, attempted for the purpose of saving life, are frequently unsuccessful on account of the reduced condition of the patient and the difficulties, tediousness and loss of blood attending such operations. The writer, a short time ago, was fortunate enough to witness, through the kindness of Dr. Joseph Price, an operation of this kind in which the tumor had attained an immense size, estimated at sixty to seventy pounds, with universal almost inseparable parietal and intestinal adhesions. Such deaths should evidently not be placed at the door of the operator or the operation, but they clearly are to be charged to the timid physician who counselled the fatal delay. The marked improvement of our present results are due both to a greatly perfected technique and also to a clearer and more general understanding of the risks attending these tumors and consequently less delay than formerly.

The operative treatment of uterine fibroids has received so much attention in our present medical literature by men of more ability and greater experience, that I shall not attempt

to give a detailed description of the different operative procedures, especially as in doing so I would necessarily go far beyond the limits of my paper, but I will confine my remarks as briefly as possible to the indications and results of the different methods enumerated below.

The operations practiced for the radical cure of myomatous growths are: (1) Vaginal enucleation; (2) removal of appendages; (3) enucleation by laparotomy; (4) supra-pubic hysterectomy.

(1) *Vaginal enucleation* has naturally a limited field and is only applicable in fibroids of the cervix, in submucous or interstitial myomata, which are partially born into the vagina, and also in submucous growths not exceeding the size of an infant's head, where previous dilatation of the cervix is required. The operation is a perfectly safe one, provided suppuration and sloughing of the projecting mass has not taken place.

(2) *Removal of the appendages* is practiced for the purpose of bringing on artificial menopause, with its accompanying cessation of menstruation and shrinking of the tumor. It is indicated in small fibroids of the uterus up to the size of a child's head. There is no unanimity of opinion as to the actual merit of this operation. Some operators, chiefly A. Martin, have discarded it because it gives insufficient guarantee of success; while others, in fact the great majority, practice and recommend it, and are well satisfied with the results obtained. Whether failures are due to the fact as pointed out by Sinclair, that "the main arteries have not been tied together with the venous plexuses, with the result that while the blood supply to the uterus is still free, the return

flow is interrupted, the organ remains congested, and involution is retarded, even after the adnexa has been thoroughly removed, menstruation continuing for months and years" is still an open question. It is evident, however, that the better the results of hysterectomy become, the less frequently will oöphorectomy be performed, as it is certainly a less ideal operation than the removal of the offending tumor; but for some time yet the removal of the adnexa will remain a recognized operation for the reason of its perfect safety, at least, where the ovaries can be easily found and removed, and where the patient is not too much reduced from long continued loss of blood. It is in weak patients especially, in whom it would be hazardous to do a more radical operation, involving a greater amount of shock, more loss of blood, and longer duration, where oöphorectomy shows its advantage.

(3) *Enucleation of the tumor by laparotomy*, originated by A. Martin, is an operation meriting a more general appreciation than it has received in this country. It consists in splitting the capsule, shelling out the tumor or tumors from the uterine body, and the closing of the cavity thus obtained by deep, buried sutures. Its great advantage over other operations lies in the fact that it leaves the uterus, no matter how crippled; and to a young woman this is a matter of sufficient importance to serve our attention, though it may very rarely be capable of conceiving and bearing a full grown child. The operation is particularly indicated in subperitoneal and interstitial fibroids of young women, in which these neoplasms can be enucleated without opening the uterine cavity, and in

which a portion of the uterus can be preserved. With this limitation the operation gives a very favorable prognosis, at least equally as favorable as the more radical procedures.

(4) *Supra-pubic hysterectomy* has the widest field of application in the treatment of uterine myomata. Thanks to the untiring efforts of the abdominal surgeon, such progress has been made in the perfection of its technique, that its mortality within the last ten years has been reduced a hundred per cent., and it is not an illusory dream when we think the time not very far distant to see the results of hysterectomy compare favorably with those of ovariectomy. While at present the extra-peritoneal treatment of the pedicle still shows the largest percentage of recoveries, the greatly improved intra-peritoneal methods are so rapidly gaining in favor, and hold out so many advantages over the former, that they seem destined to supercede it entirely in the very near future. The operations of greatest promise for the future are total abdominal hysterectomy, which, in the hands of such men as Martin, Polk, Krug, Boldt, Edebohls and others, has already given such enviable results, and that devised and so successfully performed by Baer. While personally favoring total abdominal hysterectomy, of which I have had two cases, both successful—with Dr. Baer's method I have as yet had no experience—the fact cannot be disguised that the operation is accompanied by more loss of blood, and, therefore, more shock. It is more tedious and time-robbing, and more difficult of performance than the extra-peritoneal methods. Items of sufficient import-

ance to outweigh the disadvantage of the latter, chief of which are a longer convalescence and liability to hernia, when we deal with a patient greatly reduced by profuse hæmorrhages and long-continued suffering. I would, therefore, not be willing to discard the extra-peritoneal operation, at least at the present stage of our experience. While my preference in good, vigorous subjects would be total abdominal hysterectomy, I would feel that the weak, reduced patient had a better chance for life with extra-peritoneal treatment of the pedicle for the reason given above.

In concluding this rather too lengthy paper, I would like to lay stress again on one point, to which I referred in the introduction; and it is this, that for an intelligent therapy of uterine fibroids, whether surgical or symptomatic, it is absolutely necessary to make a careful investigation of the case before us.

The diagnosis of myoma is insufficient. We must determine its location, character, rapidity of growth and the symptoms to which it gives rise. Then, again, it is necessary to consider the patient, her age, her social surroundings, and her physical condition before we decide whether she is likely to be benefited by symptomatic treatment, or whether she demands surgical measures in order to get relief. Treating every case of fibroid by galvanism, can only result in harm; nor would it be justifiable to subject every patient possessing a myoma to an operation. Even when we have determined on an operation, we should use our best judgment in selecting that method which is likely to prove the least dangerous to our patient.

Myoma Uteri and Its Treatment.¹

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IN the matter of the treatment of myoma uteri the profession has been undergoing gradual education, especially during the past fifteen years. Incidental in this education have been Schroeder's operation of myomec-tomy, or enucleation of the myoma, and the system of treatment with galvanism. The former is difficult, and even in the best hands has not given results such as have been obtained by other means. The latter held out great hopes of revolution, not only in treatment, but in results to be obtained. The expectations of many were high and confident in view of the endorsement of the method by such eminent gynæcologists as Sir Spencer Welles and Keith. These expectations have not been realized, at least to the extent which had been looked for. The best that has been accomplished, in the great majority of cases, is *symptomatic cure*, which does not remove the tumor, but leaves it as a continual reminder of the possible recurrence of all the bad symptoms.

The important practical question to be considered is whether the symptoms which attend uterine myoma are of sufficient gravity to warrant the exposure of the patient to the risks of a severe and possibly fatal operation, together with the mutilation attending the removal of an important organ. The symptoms of the disease depend not alone upon the con-

ditions immediately associated with the tumor, but upon the sensitiveness of the individual as well, the latter being a matter dependent upon race and temperament. Those symptoms which are most common and troublesome are hæmorrhage, pain, and disturbance of function. In exceptional cases a tumor of considerable size may give rise to none of these symptoms. Hæmorrhage occurs most frequently with myomatous degeneration of the entire uterus, with intra-mural growths, and with those, in general, which are implanted in the immediate vicinity of the uterine artery. The monthly pelvic congestion, and the excessive nutrition with consequent active tissue changes of the endometrical mucous membrane are probably the chief inciting causes to hæmorrhage. The result of constant loss of blood in these cases is extreme anæmia and unfitness for the duties of life.

The pain with myoma uteri may be intense, especially at the menstrual epoch. Pain is not necessarily governed by the size of the tumor, a small tumor often causing great trouble in this respect. Disturbance of function may refer to digestion or assimilation. There may be obstinate constipation, or the nervous system may become greatly deranged. In a small number of cases spontaneous atrophy may take place with disappearance of the bad symptoms, and even of the tumor itself, but such cases are rare. Kleinwächter has

¹ Abstract of paper read before the New York Academy of Medicine, October 19, 1893.

investigated the subject of the rate of development of myomata, using forty cases in his personal experience in which he watched their progress. Development was slower in the fibroids and fibro-myomata than in the pure myomata. Temporary enlargement was occasionally observed during menstruation, and temporary diminution after exhausting disease. In a number of cases growth continued after the menopause, and in one case cancerous degeneration occurred. The last-mentioned fact is important, and this is not an isolated case.

Treatment may be palliative, semi-radical, or radical. No case of tumor uteri should go untreated; the absence of symptoms does not signify that symptoms will not come. Palliative treatment is for those who will not entertain the question of radical measures, and as a means of preparation for radical measures. Foremost among palliative measures is galvanism. It will relieve pain, will often check hæmorrhage, but will seldom cause reduction in the size of the growth. Galvano-puncture is not approved of; it is too apt to expose the patient to the danger of sepsis and peritonitis. It should not be continued after its favorable effects cease. Ergot, hydrastis, and other astringents, will sometimes produce temporary relief. Dieting, as a means of treatment, does not seem rational. Curettage will frequently check hæmorrhage and excessive secretion for a time.

Semi-radical measures include removal of the ovaries and tubes, and the ligation of the vessels of supply of the tumor. They are indicated for small tumors accompanied with obstinate dysmenorrhœa, for myomat-

ous enlargement of the uterus of moderate extent with pain and hæmorrhage, for massive tumors in which complete removal would be extra-hazardous, and for cases in which the vitality of the patient is too low to bear the shock of complete extirpation. Radical measures consist in the removal of the tumor alone, or the tumor with the uterus and appendages. If the tumor is small and pediculated it can often be removed entirely, without great danger, and without injuring the uterus. If the tumor and uterus are to be removed the method of complete extirpation will usually be preferable to any which leaves behind a stump or pedicle, and that method is the one which is preferred and recommended by the writer. With the use of the Trendelenburg position it can be performed with much greater facility than formerly, and the results which have thus far been accomplished are the strongest arguments in its favor. The removal of the myomatous uterus is believed to be justifiable, if the organ is a constant menace to health and comfort, and if it can be removed with comparatively little danger. Mental derangements after this operation are comparatively rare. The influence upon the sexual appetite is much the same as after removal of the tubes and ovaries alone, being governed largely by the temperament and previous history of the individual. The future history of this subject may, and probably will, be like that which has attended ovarian tumors, demonstrating the inadvisability of waiting until a patient has been reduced to extremities by pain and hæmorrhage before resorting to measures which are absolutely curative.

Notes in Regard to Uterine Fibro-myomata.¹

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Professor of Gynecology of the Medical Faculty of Mexico; Member of the Academy of Medicine of Mexico.

GENTLEMEN :

I have the honor to present to you extracts from some of my notes concerning the interesting subject of uterine fibro-myomata, communicating to you only those points which, in my opinion, offer new interest. It seems to me that there are only two of these of importance; the first is relative to the ætiology and the second to the diagnosis, in relation to the uterine parenchyma.

Statistics.—Among 984 patients whose names I have recorded for the first time, during the space of three years, there were thirty-nine who suffered from uterine fibro-myomata. Of these thirty-nine cases there were twelve multiple or sub-peritoneal; fifteen sub-peritoneal, intra- and extra-mural; three intra-mural only at the body; two intra-mural, comprising body and neck; one solitary and large pediculated peri-uterine, complicated by syphilis; two fibro-cystic, peri-uterine; four intra-uterine, with broad base.

Among the patients of the first series, there were three who had palpitations and aortic souffle, one had precordial oppression and strong cardiac impulse, and another had atrophy of the heart, as was shown later by an

autopsy. In the second series, three presented intense pre-cordial impulse and metallic sound at the auricle; one mitral insufficiency; one excessive resonance of the first sound, with exaggerated impulse; one fatigue on walking and low arterial tension; two have had cases of deaths in their families caused by disease of the heart. In the third series, one of the patients had a purring sound and pulmonary congestion.

Finally, in the fourth series, two had an anæmic souffle.

Among 1560 patients recorded for the first time in the clinic of my private infirmary, and belonging for the most part to the poor and laboring class, I found only twenty-four who were suffering from fibro-myomata. Of these there were three sub-serous, twelve intra-mural, two intra-uterine, and two sessile in the vaginal portion of the cervix.

Among the patients of the first series, three had violent impulse of the heart and palpitations; one had a systolic aortic murmur.

In the second series, one had a systolic murmur over the aorta, with vertigos; two had a feeble murmur not extending over the sternum; two had metallic auricular noises; and finally, two who were over 40 years old had gout in the hands.

To sum up, out of thirty-nine pa-

¹ Read before the Section of Gynecology and Abdominal Surgery of the Pan-American Medical Congress, Washington, 1893.

tients of the first class, with fibro-myomata, there were twelve who presented various forms of heart disease. Among twenty-four of the second class, there were nine similarly affected; as is seen by the above statistics there is a remarkable difference between the relative number of patients affected with fibro-myomata, according to whether they belong to the classes in easy circumstances, or to the laboring class, a circumstance which is equally recognized by all the schools. It appears equally from my notes that there is a very frequent coincidence between uterine fibro-myomata and organic lesions of the heart; of the latter, relative stenosis of the aortic orifice is the most frequent. It is equally noticeable that this and the other cardiac affections occur chiefly in cases of intra-mural and sub-peritoneal fibro-myomata. The latter cases seldom occur in company with the little pediculated fibro-myomata of the uterine cavity.

In consequence of what I have said, and of the studies which I have made up to the present time on the patients mentioned above, I venture my opinion in these terms: *The production of uterine fibro-myomata is a fact subordinate to the manifestations of arthritis including in the latter rheumatism and gout, as do Martincau and Pidoux.* At any rate, this point is of importance, at least, in regard to fibro-myomata of the uterus in Mexico.

Concerning the determining causes of the neoplasms, I have found in my practice that the determining causes of the neoplasms are flexions of the body on the neck and stenosis of the

external os. I could satisfy myself, however, that these flexions are always pre-existent to these neoplasms.

The second point to which I wish to call your attention is to the diagnosis of these tumors. All experienced gynæcologists have used the uterine sound in such cases, particularly for ascertaining the thickness of the uterine walls, in order to determine on which side the neoplasms lay; as far as I know, however, no one has obtained any further information from sounding the uterus than what can be learned in regard to the precise situation of the growth.

By making exact measurements with the malleable sound to the very end of the uterine cavity I have assured myself that the increase of the cavity is in proportion to the thickness of the uterine tissue which goes to form the capsule or capsules of the fibro-myoma. It is very important to know this particular fact in these cases; up to the present time it was only learned by direct inspection. The rule which I have just given suffers few exceptions.

I think that it is important to affirm that for the radical cure of the neoplasms in question by means of surgery, it is preferable, for the future of the patient, to perform abdominal hysterectomy as I have seen it performed and as it is recommended by Professors Hegar, Kalténbach and Carl Braun, of Vienna; at any rate, this should be done unless it is possible to extirpate all nodules which might develop later on. My experience in these operations authorizes me to support this last opinion.

Mexico, June, 1893.

EDITORIAL.

The Pan-American Congress.

THE first reunion of delegates from the various nations of America has been successful beyond the expectations, if not beyond the hopes, of those who originated the plan of holding a Pan-American Congress, and who by great labors in the face of many difficulties were able to bring the whole project to a highly satisfactory conclusion; indeed, so successful was the congress that it was immediately decided that this should be the first of a series of similar meetings, the next of which will be held in the City of Mexico in September, 1896. The meeting in Washington was largely attended, and the work in all the sections was of a high order. The papers published in the preceding number of the ANNALS, and in this one, are samples of the importance of the subjects treated in the section of Gynæcology and Abdominal Surgery, which was one of the most interesting of all the sections. On the other hand, the work of most international importance was undoubtedly embraced in the transactions of the sections on Marine Hygiene and Quarantine, General Hygiene and Demography, General Medicine, Military Medicine and Surgery, and in the general meeting of the whole congress. Although it is not in the scope of this journal to discuss these subjects, it may be said that results were attained of sufficient importance to justify the interest felt in the congress by the governments of the various American

nations, and to make it sure that succeeding Pan-American Congresses will receive suitable recognition and substantial assistance from the various governments.

The United States has set a good example in this respect by aiding this first congress with a liberal appropriation, which enabled the management of the Pan-American Congress to entertain its foreign guests with becoming hospitality, and to make them acquainted with our systems of quarantine, our naval hospitals, our universities and medical schools, and our principal cities, under circumstances which cannot have failed to leave an agreeable impression and friendly feeling. Although it may be said that international acquaintance and friendliness of men in our profession in different countries are imponderable quantities, and that it is hard to estimate how many thousands of dollars the general government is justified in spending for the promotion of such objects, yet, on the other hand, it is impossible to estimate how many millions of dollars and thousands of lives may be saved to this country by mutual friendliness and prompt and frank coöperation between the governments of the neighboring nations of this continent in preventing the introduction, or limiting the ravages, of such epidemics as yellow fever or cholera. Looking at the whole subject broadly, and from an elevated standpoint, all will agree with the

weighty and dignified utterances of the President of the United States, who, in opening the Pan-American Congress, said in effect that there is no subject which is of more import-

ance to a popular government, or which should be a subject of greater solicitude to it, than the preservation of the health of the people.

Notice.

THE index and the title-page, which should have been in the number for September last, did not appear in that number owing to a misunderstanding.

They were published in the number for October last and can be easily detached to be bound in their proper places in Vol. VI.

ABSTRACT FROM CURRENT LITERATURE.

Treatment of Vaginismus Due to Large Frænum.

DR. B. E. HADRA, of Galveston, read a short paper before the recent session of the Texas State Medical Association, entitled "Contribution to the Pathology of the Fourchette." He related a case where a young couple had a very hard time in their sexual relationship, owing to an excessively large frænum that made the insertion of the male member very difficult and painful, and led to almost a full vaginismus. The true condition was found out only when her child was born. The fourchette had then to suffer a thorough rent. Afterward, everything became perfectly satisfactory. Induced by this experience;

Dr. H. paid close attention to the condition and form of the frænum, found it of very different size in the examined females, and came to the conclusion that many cases of dyspareunia, and even full-fledged vaginismus, may be caused by such megalo-fræna, as they are liable to be irritated and fissured by cohabitation. They then become, in pathological respects, as troublesome as rectal rents, causing all kinds of nervous reflex suffering, etc. He thinks that the most sensible way to treat them is simple discission.—*Va. Med. Monthly, West. Med. Reporter.*

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of October 5, 1893.

THE PRESIDENT, DR. BARTON COOKE HIRST, IN THE CHAIR.

REMOVAL OF THE UTERUS AND ITS APPENDAGES FOR PELVIC INFLAMMATORY DISEASE, BY J. M. BALDY, M.D.
(See page 57.)

DISCUSSION.

DR. CHARLES P. NOBLE :

I have been much interested in Dr. Baldy's paper. As he suggests, this is not quite a new matter. I have seen the uterus removed in such cases, although I have not done so myself. Some time ago I was invited to see an operation of total extirpation for fibroma. The fibroma proved to be pus tubes, but the operator removed the uterus as well as the appendages.

As Dr. Baldy has suggested, the question is to be decided on its merits. If the mortality attending removal of the uterus and appendages is not greater than that of removal of the appendages alone, and it can be shown that there are any advantages in removing the uterus at the same time that the appendages are removed, the operation will be adopted. From my own experience, however, I think that the operation will seldom be necessary.

The cases to which Dr. Baldy has referred and in which he states that the appendages were cleanly removed, bear directly against the argument that I intend to make, and that is that in the majority of cases where women continue to complain of pelvic conditions after removal of the appendages, it is because the operation was not thoroughly done. In my own hands the few cases that have complained of pelvic trouble after operation were among my earlier cases, where the operation was incomplete. In some few cases the operation was not completed owing to the bad condition of the patient, so that I felt it wise to get through the operation with the least possible expenditure of time. Where the ap-

pendages are cleanly removed, I feel that, almost without exception, the uterus will undergo involution and contract below the size of the normal uterus when the appendages are present. The exceptions are very rare. At the same time I believe that there are cases where a very large uterus, infiltrated from chronic metritis, will continue to produce symptoms, and the question comes up whether, granting that it is true that we occasionally have such cases, it is better to adopt any general rule to remove these uteri, the majority of which will give no trouble, or to recognize that the operation is necessary only rarely, and do the operation that we are accustomed to do and later remove the uterus if it causes any trouble. At the present time I feel inclined to adopt the latter procedure, for, in my own hands, to leave the uterus has almost never given rise to any trouble.

I do not believe that experience will show that we can take out the uterus with the appendages with the same safety as we remove the appendages, for it will take at least some fifteen minutes longer to complete the operation. To remove the uterus will itself not take so long, but to stitch the peritoneum over the stump will require at least ten minutes. For that reason alone, unless the experience of those who advocate this operation convinces us that they can operate with great safety, it seems to me that it will be wiser to remove the uterus subsequent to the primary operation if it gives rise to mischief, which, I believe, will be seldom.

DR. G. BETTON MASSEY :

I am glad to learn that Dr. Baldy has discovered that the uterus is a pelvic organ and is involved in pelvic inflammatory trouble. I think that it is a natural sequence of his previous position in regard to taking out so many moderately diseased tubes and ovaries, that he should now want to take out the uterus. As I have contended all along, this

disease is a catarrhal disease, as a rule, and involves the mucous tract from the mouth of the womb up; and in all cases the original seat of the disease, and often the principal seat, is the uterus, but only the appendages are removed. It seems to me, now that Dr. Baldy advises removal of the uterus, he has gotten to the end of his tether. What will he do if this fails? It almost looks like an illustration of the ancient saying, "Whom the gods destroy, they first make mad."

There are other methods of cure than removal of the uterus. I think that Dr. Baldy will remember a case which he saw in 1888 at Dr. Bradford's clinic at the Pennsylvania Hospital: A Russian woman, with a deep laceration on the left side of the neck of the womb, extending up to the body, and with decided salpingitis, or a condition resembling salpingitis, on the left. There was extreme tenderness, and every insertion of the sound caused great pain; pressure over the ovarian region elicited tenderness, and the woman was in great pain all the time. This woman was under my care for a couple of weeks only, and then for some reason went to another clinic. I learned afterward that Dr. Baldy had repaired the cervix. Nothing more was heard of the case until two years ago, when she turned up at my clinic at Spruce Street. She stated that she had been much worse since the operation for the repair of the cervix. She was given another intra-uterine treatment, and was again thrown into a painful condition, but as the result of the use of vaginal applications extending over a period of one year and a half, and later of intra-uterine galvanic applications when they became bearable, she is now well, and at her last appearance, some two or three weeks ago, she was five months pregnant and a perfectly healthy-looking woman.

I am glad to place myself on record as objecting to this operation at once as both barbarous and unnecessary, though the cause given for the procedure is a recognition of my own views of the importance of metritis as the principal lesion in pelvic disease, as enunciated more than a year and a half ago.

DR. JOSEPH PRICE:

We all have, at least, some knowledge of the results due to a variety of gynecological tinkering and all of which have some direct bearing upon this subject of post-operative

trouble. As the operation, removal of the remaining uterus, is largely offered for the relief of these sufferers it is worthy of serious consideration. One could easily write a huge book on the subject if he reported all of his cases. Some of you, perhaps, examined a patient to-day, that I examined yesterday and others will examine to-morrow. The treatment commenced with dilatation of the cervix. This was followed by angry tubal and ovarian disease with fixation and also fixation of the uterus on the left side. An abscess followed, the precise character of which I am not prepared to state. Free incisions were made, one extending through the sphincter followed by packing so that it would close from the bottom up. The woman now has distressing incontinence of gas and fæces. I insist that in this case the removal of the diseased appendages clean and thorough will not absolutely cure this woman. In the womb shown to-night, the removal of the appendages followed by metrostaxis would put this womb at the size of a seckel pear in four days. The endometritis in the cavity of that womb can be wiped away with a little cotton. In a series of 200 hysterectomies many of you have seen me wipe away so-called unhealthy endometritis with a piece of gauze. These cases demonstrate that the prominence placed upon an unhealthy condition of the cavity of the uterus has been over-drawn, that the endometritis is fancied not real.

In regard to mortality. We all know that many of these patients suffer from post operative sequelæ and that many of the operations were imperfect and incomplete, notwithstanding they are recorded as complete. For instance, I have a patient in bed now and I have a trying piece of surgery to do on her on Saturday. Urine and fæces escape from a fistula. It is impossible to get a history or a correct statement, or any sort of a statement from her surgeon, one of the most prominent and best in this country. Her physician and herself have failed entirely to receive a statement as to what he removed. I know that one side or other or both remain with this fistula. This is a trying piece of work to finish. In one of the most prominent hospitals in this country, a few days ago, a man opened the abdomen from the ensiform cartilage to the pubis, shook his head and closed the incision. I rejoice to say that I am guilty of abandoning only one fibroid. I did that

because the woman took chloroform badly and the kidneys were bad. She also needed preparatory treatment. Had she been near me and under my personal care, I should have removed the tumor in spite of these things.

Keith insisted on a mortality of 5 per cent. after hysterectomy. I agree with him. While I lost six of my first hundred cases, five of these could be dismissed, three or four were cancerous and hopeless, the fourth died of pyæmia, and the sixth died of pyæmia with a huge gangrenous tumor. The pyæmia antedating the operation.

Tait recommended the removal of the uterus in angry pus cases. It is well in discussing this subject to consider the condition of the pelvic organs and uterus. I have many times repeated the section for adhesions, or ventral fixation with suffering, and in a good number of such cases where the removal of the appendages was thorough and complete, I find a little uterus, a perfectly innocent little organ. I find fixation of the omentum or small bowel or some lesion of that character justifying the second section or a third section, and let me assure you that in these repeated operations you will have uphill work to relieve and cure the patient. It is exceedingly difficult to prevent recurrence of the lesions. Only a short time ago I operated on a woman from whom one of the best surgeons of this city removed the left tube and ovary and the right tube. He records it as a complete operation although he left the right ovary. I found attached to the pedicle on the right side a link of ileum with an hour-glass contraction and generally adherent omentum. First, I released the omentum; second, the bowel; and third, removed the right ovary. In this case removal of the uterus would have been folly. I found it healthy and if some one had attempted vaginal removal of the uterus, he would not have relieved the patient. The adherent ovary would remain and in all probability the fixed bowel and ovary would have remained sources of suffering and bowel obstruction would probably follow as it did in two of Coe's cases. The co-existence of tubal and ovarian disease with extensive adhesions is a strong argument against the vaginal method. The frequent complication of tubal and ovarian disease is the one argument in favor of the removal of the uterus for cancer from above.

I must say that I am uncertain as to just which operation I will adopt. In the absence of tubal and ovarian disease, vaginal hysterectomy for malignancy is an easy operation and about all the patients should get well. I completed fifty-three operations with one death. Since then I have lost two.

In regard to the neurotic cases. Many of these women suffer from hospitalism. If you have run a hospital you have a dread of the hospital patient. One who has been in a hospital once, is hard to manage. If she has been in two hospitals, she is very difficult to manage, and if in three or four do not touch her at all. Hospitalism is hard to contend with.

I might allude to two or three cases bearing upon this subject. Some years ago I removed the diseased appendages from the wife of an engineer. I left a portion of the ovary adhering to the sacrum. It was as difficult to tear off as to remove the paper from the wall. At this point a cyst formed. The woman continued to bleed irregularly in spite of most careful curetting twice. The uterus was small. I subsequently removed the uterus with partial relief to the woman. In the severe forms of ovarian disease there is this risk of leaving a portion of the ovary adherent to the viscera or to the pelvic bones and in these pus cases there is the strongest tendency to mischief. I venture to say that in my own cases mischief occurs in 6 to 10 per cent. of the sections, but in ordinary ovariectomy it does not occur in 2 per cent.

Another case is that of a lady from New York, who in three winters spent the value of a Madison Avenue house in three private hospitals. Her treatment commenced with intra-uterine treatment, then with vaginal incision of an abscess on the left side and drainage, and repeated. Four years afterward, with three rubber tubes hanging out of the vagina, I removed the appendages and she made a beautiful recovery. The uterus was in the hollow of the sacrum and fixed. I released it and brought it to the abdominal wall. Eight weeks later, while standing dressing her hair, she felt something give way, and on examination I again found the uterus in the hollow of the sacrum. She then suffered continually for two years when I removed the uterus. She made a satisfactory recovery, but is not a cured woman. Why we should expect so much from some of these pa-

tients I am not prepared to say. I am surprised that more of these women with prolonged suppurative disease and great emaciation, to which are added the nervous phenomena of a precipitated menopause, do not go to the insane hospital.

In regard to these so-called post-operative sequelæ, it may be well to remember that some of them may antedate the operation.

In neglected and badly managed cases it is surprising that they recover speedily, gain flesh and strength rapidly. Too much prominence has been placed upon pelvic pain or discomfort, and the phenomena incident to a premature menopause-bleeding or dodging is common in a normal menopause-pelvic pain. Backache, mental disturbance are all common and distressing at this time.

In but few cases operated upon is the uterus responsible for the unsatisfactory result: the mischief resides at other points.

DR. M. PRICE:

There is no question in my mind as to the impropriety of the operation advocated by the author of the paper. I could not conscientiously say before a court of justice that a man who deliberately took out the uterus for bad pus tubes or ovarian cyst, as in the case shown, was guilty of doing his duty. I would plead with him not to ask me to testify. It seems absurd to remove the uterus for intra-uterine trouble where the disease is within reach of any application, and within the reach of any operator that can cure anything from without, and thus increase the risk ten-fold. I cannot for a single moment understand why we should do this. I have seen hundreds of these cases of pelvic disease and have done over two hundred operations myself, but never yet, in that whole list of cases, have I had to remove the uterus or been annoyed by symptoms that have followed the removal of the tubal and ovarian disease. I have seen a few patients who have complained of pain in the back, but have no doubt they would have complained no matter what procedure had been adopted. In these cases the pelvic viscera, bowel, omentum and mesentery were all in such a fused condition that there could be no question as to what would be the result. You cannot expect to cure such cases, and these are the very cases in which these gentlemen do not remove the uterus. They are glad

enough to get out and leave the uterus. Why should we remove the uterus for the cure of these things that are within easy reach? Why should we remove the eye for the cure of granular lids, or the sinuses of the nose for the cure of catarrh? This would cure the disease. The inside of the uterus is within easy reach, although I have not had to treat it in the way to which Dr. Massey alludes.

The gentleman admits that he has had seven deaths in eighty cases. I venture to say, from the description of his cases, that more than half of the operations have been for uteri not as big as my fist. I have never yet, in all my gynæcological experience, seen a uterus removed for a tumor that was of less size than my head, except in malignant cases, and pelvic bound. We have no right to take out the uterus for pain in the back. We have no right to go into the pelvis for nervous symptoms simply because the woman has a uterus in her body. Without good and sufficient reason we have no right to meddle with it no matter if there is disease of the appendages. Remove the diseased appendages. If this operation is going to add one single death to the list of one hundred ovariectomies, it is guilty of murder.

DR. W. EASTERLY ASHTON:

There is, unfortunately, among some surgeons either a tendency to run in a given groove, or to go from one extreme to the other. I am personally opposed to the removal of the uterus as a routine procedure for the relief of inflammatory disease. On the other hand, however, there are cases in which the muscular structure of the organ is the seat of disease where I would strongly advise hysterectomy. I refer to septic conditions following labor or miscarriage, and also to those cases of pyosalpinx where the uterine walls have become involved.

The leucorrhœa which continues in some cases after the removal of the uterine appendages is due to an inflammation of the mucous membrane, the result of germ infection. As a rule this discharge gradually ceases as the uterus becomes more and more atrophied. If, however, the hypersecretion continues, curettement of the interior of the uterus will, if properly performed, cure the disease. It is obviously not necessary, therefore, to resort to hysterectomy in these cases.

I am glad to learn from the remarks of Dr.

Price this evening that he has changed his views as to the value of curettement in cases of endometritis, and that he does not hesitate to employ the curette in the treatment of these cases.

In conclusion, I desire to state that unless there be an absolute indication of disease in the muscular walls of the uterus, it is bad surgery to remove the organ; on the other hand, however, if there be present an endometritis, we should wait a sufficient length of time for the atrophy of the uterus, which follows the removal of the appendages, to cure the disease. Should this not take place, the cavity of the uterus may be curetted.

DR. CHARLES P. NOBLE:

I wish to add a word to what I have already said. I believe, as I have already stated, that the number of cases which will give rise to trouble is small, yet we know that occasionally we have metrostaxis after operation, and the uterus remains large; but in these cases, if the vigorous use of the curette does not arrest the hæmorrhage and cause the uterus to undergo involution, I believe the ligature of the uterine arteries on each side will do as much good as taking out the uterus. I have tied the uterine arteries in conditions somewhat similar. I recently proposed to do a hysterectomy, but the patient's condition became so bad that I thought it would be bad surgery to complete the operation. I removed the appendages, but I felt quite certain that she would bleed subsequently, for the endometrium was extensively diseased. Some two weeks later I cut off the lower portion of the uterus and tied the uterine arteries on each side. I have done the same thing in hyperplastic uteri where I have operated for prolapse. I believe that in this way we can bring about involution without resorting to removal of the uterus.

DR. M. PRICE:

As Dr. J. Price has left the room, I should like to correct a statement made by one of the speakers. It was said that Dr. Price had asserted that he never used the curette. This is not correct. He has said that he never used the curette for the delivery of the placenta, always using his index finger for that purpose. He never said that he did not use the curette under any circumstances.

DR. G. BETTON MASSEY:

I may remark that most likely these cases that Dr. Baldy tells us about as being already cured are like a case he reported last spring, where he took out a small fibroid, about the size of a seckel pear, after the patient had received electrical treatment. That case was seen recently by me, and is suffering very much. She has no ovaries, she now has no uterus, so he will have to devise something else for her.

I remember well the case that Dr. Price mentioned, where a lady had suffered much for two years after removal of the appendages, and came to him for removal of the uterus. She was sent to me and remained two weeks, but I did not get along very well with her. That case had a most offensive discharge from the uterus, and in addition to this a continuance of menstruation. These were the only things that she complained of. He tells us now that subsequent removal of the uterus failed to cure the case. It is possible that nothing would have relieved her, on account of the unfortunate mental condition, yet I think that the physical conditions could have been cured by persistent treatment of the uterus, but it would have taken more than two weeks. The peculiarly offensive discharge from the uterus made me suspect a sinus leading through the tubal opening to the seat of an infected ligature.

DR. HARRIS A. SLOCUM:

I am thoroughly in accord with what Dr. Baldy has said. He has chosen his language carefully, and I understand him to say that when the appendages have got to be removed, and when there is any indication of disease of the uterus, it is better to also remove the uterus. To remove the uterus after the ovaries are gone does not further lessen the female attributes of the woman. My views on this point are fully given in the *Medical News* of October 7. I maintain that if the ovaries are already gone the uterus is an entirely useless organ. It may threaten the organism through the reflexes. It may, also, on account of the channel running from the cavity to the tube, threaten the endometrium with subsequent inflammation. That is a point that the curette will not reach. Where do we have the most lasting inflammation in a tract? It is at the

point of stricture. The part of the tube nearest the uterus is the narrowest, and the part penetrating the uterus is exceedingly narrow. As Dr. Baldy has mentioned, we often notice the ease with which a ligature will cut through the uterus. That is an indication that inflammation still exists. It exists not only in the parenchyma, but also in the endometrium, and that remains even after the tube has been entirely removed and the so-called diseased portion has been taken away, but a certain amount of disease remains, that is, the portion from the pedicle to the body of the uterus, and remains as a point of perpetual departure for subsequent attacks of endometritis.

What use the uterus can be in such cases is hard to say, and I see no objection to its removal if the mortality is not increased. I think that the latest method of operating by ligating the uterine and ovarian arteries by Baer's method, so far as I have seen it, is the ideal operation, and the mortality should be small. The fear of infection should be less, because, as a rule, the infecting portion is above the incision. After removal of the appendages alone there is more danger of septicæmia. After removal of the uterus there is little danger of pus coming in contact with the peritoneum.

When the ovaries are absolutely condemned there is no physiological reason why the uterus should not also go. On account of the inferior branch of the hypogastric plexus, we have reflexes which are not checked, but probably made worse, by the change in circulation, and from the fact that the uterus has nothing to do physiologically, and never will have.

DR. J. M. BALDY:

The colored girl to whom Dr. Massey refers had a fibroid tumor as large as one's head. She was suffering in bed four months after the electrical treatment. I then removed the tumor. I consider that I should have done less than my duty had I not removed it, and if she is still suffering it is unfortunate, as she is doing so in all probability on account of the bad advice she received not to have it removed, until she was in such a condition that her recovery is tedious and long drawn out.

As far as the other case is concerned, that of the Russian woman, the repair of the cer-

vix was done by another gentleman. I assented to and assisted at the operation. She has complained ever since. She has been in my hands a dozen times in the last six months. She will complain as much after the baby is born as she does now. She is one of the chronic hospital grunts and growlers we all see, and the mere fact that she had a torn cervix repaired signifies nothing as to her present complaints, excepting that the operation did her no good. It certainly did her no harm. Electricity seems to have failed as well as surgery in this case.

In regard to incomplete removal being the explanation of most of these cases of post-operative sequelæ, I do not believe that is the fact. Most of these cases of post-operative sequelæ have come to me from the hands of the Drs. Price, and I am confident that they remove the appendages completely. I have seen the same thing after my own operations where I know that I have removed them completely.

I realized when I brought this subject forward that I should be criticised, but I am prepared to stand by what I said, and I predict that before long some of you will come around to this view. There has not been a single valid argument against removal of the uterus advanced in the discussion. It has been stated that it is unjustifiable and that it is murder, but no one has offered a single valid argument against it. Such talk is sentiment and assertion, but not argument or reason. The appendages are gone. The change of life has come on. What good is the uterus? It is no good to the woman or anybody else. Can it be dangerous, or is it ever dangerous? In my paper I emphasized the fact that I was speaking of pus cases where the uterine walls were infiltrated, and not of a small amount of disease such as some have spoken of. I spoke of those cases where a ligature will cut through the uterine cornua and where there is even pus in the walls of the uterus, although, perhaps, microscopical. Now if the tube wall is infiltrated with pus and worthy of being removed, why is not the uterine wall infiltrated with pus worthy of being removed? Can the curette reach the uterine wall? The gentlemen who have most strongly spoken against this treatment have taken the ground that the uterus after operation should be treated by intra-uterine applications and by

the curette, yet these are the gentlemen who have constantly condemned the use of the curette and intra-uterine treatment, and now, sir, they have the assurance to come here and say that they would not do anything to relieve the symptoms arising from this organ but use this treatment which they have condemned, and whose statements are on record against them in these very transactions. What do you presume, Mr. Chairman, is the animus of such criticism, and what, sir, is it worth? Curettement and intra-uterine treatment will not reach disease in the uterine walls. If it will do that it will reach it in the Fallopian tubes. If it is murder to remove the uterus, it is murder to remove the Fallopian tubes: the disease in the two organs is the same and arises from the same source.

The very first patient on whom I performed this operation of hysterectomy for post-operative sequela, I treated for months after the operation by intra-uterine measures, and then took her into the hospital and thoroughly curetted the uterus, and packed it with gauze, without any result. That was a patient of the Drs. Price, in spite of the statement by them that all of their patients get well. That woman went around for months not cured, and complaining bitterly. She was cured by the removal of the uterus. The statement that such uteri as the one before you will in four days become as small as a seckel pear is an exaggeration with which we are all becoming rapidly familiar. It is absolutely not a fact. It is not a scientific fact that any uterus so large and diseased will after removal of the appendages become as small as a seckel pear even in four months, and sometimes not in four years. It is true that after removal of the appendages many of these uteri do atrophy in a short time, as after the menopause, but these are clearly not uteri infiltrated with pus. They constitute the class, to which I referred, to which this operation is not applicable, where the uterus has prior to the operation thrown off the septic disease and is already fairly healthy. If a patient has gone two or three years with pus tubes, and the uterine wall infiltrated with pus, I do not believe that it is even in the range of possibility for removal of the appendages to bring it down to the size of a seckel pear in a period measured by days. Many are never brought down to a condition of health. Many patients are now running

around the city with uteri half as large as normal, and remaining so a year after an operation, and some of these will have to have their uteri removed if they hope to regain their health.

I do not claim that this cures all cases, and I have no doubt that by removing the uterus with the appendages we shall remove some uteri which would become healthy if let alone. That I grant. That I know will be so. But is there any harm done by the removal of the uterus? That is answered entirely by the mortality. Can the uterus be removed as safely as the appendages? Therein lies the gist of the whole question. What is the comparative mortality? There is no earthly argument in favor of retaining the uterus. It may become a positive trouble, and in many cases it does so. Continued and profuse bleedings, profuse leucorrhœal discharges, and backache and pains are not rare conditions under these circumstances. It may undergo cancerous degeneration, even if that is a far-fetched supposition. There are many ways in which it may give trouble, and there is no reason why it should remain. If it can be removed safely I see no reason for leaving it in the class of cases to which I have referred.

In regard to the mortality after hysterectomy, the fact that three deaths occurred after the vaginal and only *four* after the *supra-vaginal* operation, all four cases being tumors larger than the head, will answer the criticisms offered on that score. Undoubtedly, by a skillful surgeon, the uterus can be removed as safely as the appendages alone.

As to the case from New York with drainage tubes projecting from the vagina, that referred to by Dr. Price, that patient was unrelieved by removal of the appendages, and the operator subsequently removed the uterus. This is in the direct line of reasoning that I have followed, although he now condemns the same procedure in my hands. Consistency, thou art a jewel! It is true that patient was not cured, but he did not state that the patient was not relieved. How could you expect a woman who had undergone what that one had for years to be cured by any operation in a few months? This is not in reason. This is a great mistake that we have made in the past of expecting too much, and promising too much, from an operation. Some of these patients are broken

down in health and racked by pain, and their nervous system is in such a condition that they never will be absolutely cured, only relatively cured. I claim, however, that they will get more relief from removal of the uterus with the appendages than if we remove simply the appendages.

Dr. Massey asks what will I do when this fails? When I find this as worthless as I have found electricity I will throw it aside as I did electricity, and hunt for something else.

EXPLORATORY CELIOTOMY FOR ASCITES. BY FRANK W. TALLEY, M.D.
(See page 62.)

DISCUSSION.

DR. M. PRICE :

I will call attention to one or two cases illustrating the value of procedure which the doctor recommends. I hardly think that I should say that this was exploratory simply because it ends that way. In the report of his cases he has indicated what his object was. In tuberculosis and in cancer I think that we can usually diagnose the condition before operation, but the operation is required because it is the only safe method of evacuating the fluid. It is absolutely safe. I have done the operation a number of times in tuberculosis and cancer where the relief was very marked. In fact, a drainage tube left for a day or two forms a perfect tract which will afford drainage for weeks and months. In a case operated on a few months ago, I opened the woman for supposed ovarian disease. There were large masses on either side. I did not suspect tuberculosis, as she had been confined three months before, and it was supposed that the trouble started from septic complication at that time. I found the whole peritoneum studded with tubercle and the ovaries apparently a mass of tubercle. The uterine wall was covered with shot-like bodies. The fluid was evacuated and the whole peritoneum dusted with a drachm or a drachm and a half of iodoform. The woman is now about, but I do not suppose that she will be cured. Dr. Flick believes that if exploratory section is repeated and iodoform thoroughly used, a cure will be effected in these cases provided there is no tubercular involvement of other organs beyond our reach.

In another case which has been reported to this Society the patient had been in bed eight months and was carried to this city on a litter. She was opened for diagnostic purposes and for the removal of the disease if possible. Tuberculosis was not suspected. In that case we removed large tubercular, cheesy lumps from the mesentery. Some as large as a small walnut. Ten or fifteen were removed and the smaller ones were dusted with iodoform. That girl, after four weeks, was able to leave the hospital, and spent the summer visiting her friends. The tubercular trouble, however, reappeared subsequently. Whether or not she took cold causing the tubercular trouble to develop in other parts of her body, I do not know. In this case Dr. Flick advised repeated sections as the first one had done so much good.

DR. G. BETTON MASSEY :

This subject is very much like one which we discussed last winter as to how frequently the surgeon is justified in taking the risks of abdominal section for merely diagnostic purposes. I think that the conclusion to be drawn depends somewhat upon the results. I did not quite catch what was the result in the second case.

DR. TALLEY :

The second case made a good recovery. The first case died in the course of two weeks.

DR. MASSEY :

It is clearly evident that some of these patients die from the exploratory section. The statement has been made that simple tapping or aspiration is unsafe, mainly because of the danger of sepsis, and that the only safe way of treating these hopeless cases is by section. I do not see why a man who would use a clean knife would use a dirty tube. He can obtain asepsis in puncture as well as in section. I think that where you can make a reasonably sure diagnosis, repeated aspirations have a decided value in prolonging life and adding to the comfort of the patient.

DR. CHARLES P. NOBLE :

I wish to say a few words on this subject. In general I agree with the position of Dr. Talley, that the fluid can be more safely evacuated.

uated by section. At the same time, I do not know that I would advocate section in all such cases. I think that where the diagnosis is perfectly clear that the case is malignant it is useless to put the patient to the annoyance of going through a section. There are always several ways of looking at a thing. If the patient is poor, it involves her going to a hospital. If well to do, it involves considerable expense. In all cases it involves the distress of submitting to operation. Hence, in hopeless cases, it seems uncalled for. It seems to me that for what is gained by the section it is hardly worth while to do it under these circumstances.

In cases where the diagnosis is not clear (and there are many cases where it is difficult to say whether or not the patient can be cured without opening the abdomen) there is no question as to the advisability of doing one exploration. If the case can not be cured we may subsequently resort to tapping, I should not resort to repeated section in hopeless cases, because of the greater expense and the necessity in poor cases of removal to the hospital. If the patient is going to die in a short time she had better remain at home among her family.

DR. W. EASTERLY ASHTON:

In my judgment I do not know of any condition that would justify tapping, for the simple reason that when we tap we are in absolute ignorance of the position and fixation of the abdominal contents. It is no argument to say that we should tap when we desire simply to get rid of fluid, because it is less trouble than making an incision. If we simply desire to draw off fluid from the abdominal cavity, it is not even necessary to remove the patient from the bed. We cut through the different layers of tissue in the belly wall, and pick up the peritoneum with catch forceps and divide it; you are then absolutely certain not to injure any of the intra-peritoneal organs.

Dr. Noble has said that if we have once performed an exploratory incision, and find that the disease is hopeless, tapping should be subsequently resorted to if the abdomen refills. It is in this class of cases especially that tapping would be most dangerous, as there is greater danger of intestinal fixation. I repeat again that I do not believe there is a condition in which it is good surgery to

plunge a trocar into the abdomen of a man or woman.

DR. J. M. BALDY:

Dr. Ashton has taken to a great extent out of my mouth what I intended to say. We may make a positive diagnosis of cancer; that we can do in certain cases, but can we say positively whether or not it can be removed? There may be cancer of the intestines with a good chance of resection. There may be cancer of the appendages with a good chance of removal. The presence of cancer is not always a contra-indication.

Is there any truth in the statement that there is more trouble, risk and expense to the patient in making an exploratory section than in tapping? In one case you must have a knife, needle, needle-holder and thread; in the other case you must have the aspirator and needles. I submit the question, which is the most trouble? The aspirator gives more trouble, and gives rise to more bad feelings in a man's mind than any other instrument, except the Paquelin cautery. As regards trouble, the patient need not be moved to make the incision. It is not necessary to take her into a private hospital and charge big fees. It is infinitely safer than the trocar, as I have reason to know. An incision of half to one inch is a simple, easy thing, with the patient in bed, and without giving much discomfort. The finger can then be introduced and you can determine whether you can do anything else or not, and you do not run the risk of puncturing the intestine. If it is necessary to repeat the operation, you should drain permanently.

With Dr. Ashton I cannot conceive of a single condition justifying tapping, without it be the presence of an ovarian cyst complicating labor. There the operator might tap the cyst, and immediately after the delivery of the child proceed to its removal.

DR. CHARLES P. NOBLE:

I took the position that it was wise to make a preliminary section, but I still hold that in hopeless cases it is useless to put the woman to the annoyance of repeated sections. If you have a sterile trocar, all that is necessary is to scrub the abdomen, which you can do yourself. I would ask whether any of the gentlemen would be ready to do repeated sections under such circumstances without

any nurse; or whether they would continue to subject the woman to the expense and trouble of a nurse; and whether they would do this without the remuneration we usually expect from a section?

My experience with tapping in about fifty cases has been that no accident has happened. While it is possible that a vessel may be wounded, as a matter of practice it rarely happens. I still maintain that aside from a preliminary section, it is unnecessary to subject a hopelessly ill patient to repeated operations.

HYDATIDIFORM MOLE OF UTERUS, BY
HORACE FOX, M.D. (See page 60.)

DISCUSSION.

DR. CHARLES P. NOBLE:

I have met with one case which I shall report, as the condition is rare. The patient was a young primipara of rather poor development. Her sexual system was imperfectly developed, which was possibly the cause of the degenerative condition. The history was similar to that which we find in the majority of cases of hydatidiform mole, namely, a history of repeated hæmorrhagic discharges, rather currant-colored than bloody, with the fact that the size of the uterus did not correspond with the period of pregnancy, and that the uterus was decidedly harder than normal.

In this case I made a diagnosis of dead ovum and advised abortion. I emptied the uterus and found it filled with this hydatidiform mass. The woman was supposed to be five months pregnant, and the size of the uterus corresponded to three months. In some cases the mass grows rapidly, so that the uterus instead of being smaller, is much larger. I think that a prudent man who watched his case for a little while and noticed the peculiar blood-stained discharge, and carefully palpated the uterus and noted the difference in consistency, would have a shrewd idea that it was not a normal pregnancy, and that it was a hydatidiform or some other form of mole.

DR. HORACE FOX:

I believe that the points mentioned by Dr. Noble would, to a certain extent, aid in making the diagnosis, but I adhere to my original assertion that, the diagnosis will not be *certain* until the cervix is sufficiently patulous to permit the introduction of the index finger into the uterine cavity. As regards hæmorrhage, in the case reported, there was no bloody discharge from the beginning of the pregnancy up to the time of the evacuation of the mass, a period of seven months. The exclusion of the foetal heart sounds, ballotement, and the vaginal examination, combined with careful palpation, would aid in arriving at the correct diagnosis.

HARRIS A. SLOCUM, M.D.,
Secretary.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

ORIGINAL COMMUNICATIONS.

Enlarged Tonsils; Umbilical Hernia; Blood Dyscrasia
Following Erysipelas, Complicated by
Extensive Nævus.¹

BY DR. J. MADISON TAYLOR,
Professor Diseases of Children, Philadelphia Polyclinic, etc.

Enlarged Tonsils.—The enlargement of the tonsils you commonly see among children applying here for various maladies, and these should not fail to obtain attention, whether complained of or not. The throat of a sick child should be almost always examined as a routine measure, and much of significance will often be thus revealed. Moreover, the ordinary throat affections come within the domain of the general practitioner, and it is his privilege and duty to set limits to the progress of these, and also to remove more chronic disabilities. It is rarely needful to send

to the specialist children who suffer from enlarged tonsils, provided care is exercised in familiarizing one's self with the usual exigencies to be met, and how safely and competently to meet them. Here my oft-repeated injunction to look, touch and otherwise explore all that should be made clear comes in with much force. And first, let us consider how to use a tongue depressor in children. A small operation it may be, but good or ill success depends on your skill in this little exploit, which really is the keynote to a large element of pediatric diagnosis.

It is well to carry a small folding instrument about with you. Hold

¹ Clinical lecture delivered at the Polyclinic Hospital, October, 1893.

this concealed in the hand while you gently adjust the little patient's head. First ask him, if old enough, to open his mouth widely, and repeat some such word as "Ah!" several times, and this often enough to get a fleeting but sufficient view of the pharynx. If not, then nimbly advance the blade of the tongue depressor along the under side of the forefinger, and pass it back into the opened mouth, midway between roof and tongue, but touching nothing till the point of the blade be well beyond the point at which you aim, then depress the far end quickly, and draw it gently forward, pressing down and drawing outward the tongue at just about the sharpest part of its almost right angle. Instantly a view may be had nearly to the edge of the epiglottis. If, moreover, as usually happens, a sudden gagging or reflex widening of the pharynx occurs, involving a heaving-up of the base of the tongue, along with a straightening of this organ, a perfect view is revealed of all that one may expect or hope to see of this region.

The epiglottis can thus be plainly brought in sight, and if skill be used (it is readily acquired) this will not agitate the child so much as repeated bungling and ineffectual attempts. It is extremely important to avoid arousing childish horror at such investigations, for future as well as present needs. Again, a child is quick to recognize a gentle but dominant touch, and can be taught submission to limitless rough handling if only judicious approaches be first made. Again, stand to one side of one so inspected—at least, at first—so that if the manipulation provoke coughing possible contagion be not

hurled into your face. Learn always to make a quick but comprehensive survey of the opened areas. If time be permitted the patient may be trained to submit to deliberate procedures.

Now, as to enlarged tonsils—a very common condition in children. Usually, this is of a soft, easily-controlled kind of acute hypertrophy, subsiding promptly on proper cleansing, sprays and applications. At times this becomes more organized, and the tissues become quite hard and elastic, very like that which is seen in adults, but yet not the same in structure. The childish hypertrophies are said to spontaneously subside before the thirtieth year. It may be so. Certainly, most cases do grow less without assistance before adult age. To make a rough clinical division, then, the sub-acute or soft, semi-inflammatory variety is readily controlled by the applications of iodine and glycerine two or three times a week for a month or two:

Lugol's solution, ʒj.
Glycerine, ʒj.

Or, better:

Iodine, gr. iv.
Potas. iodide. gr. viij.
Glycerine, ʒj.

The denser, more chronic variety, is more baffling, more especially when fibrous bands have formed all about the tonsils, holding the secretions (so horribly offensive and irritating to the digestion) in the crypts, where they undergo secondary changes and increase in bulk. Dr. Harrison Allen long ago taught me the use of a blunt hook, which was used for the double purpose of exploring and unloading these crypts or caves filled with fetid secretions, and also breaking up the

confining fibres. This may be done with the aid of cocaine more freely, but much good comes of disturbing the body of the gland, ever so mildly, as to squeeze out these filthy crypts, by means of any blunt instrument pressed from below upward.

If these operations are gradually increased in vigor the throat grows surprisingly tolerant of pretty forcible methods. It is possible to pull and tear away the confining bands, to rip down the vertical sides of the crypts by the hook, and yet cause very little pain or hæmorrhage. Afterward the surfaces should be well cleaned and an application of iodine and glycerine made.

Thus may huge tonsils, which meet together in the mid line and threatened suffocation, be made to shrink away with most satisfactory swiftness. Only rarely is tonsillotomy needed, and the electro-cautery is not always approved of, even by the most extensively equipped laryngologist. It is almost with timidity I mention chromic acid, and yet that has done good work in my hands. A useful application is equal parts of tincture guaiacum and tincture benzoin comp. after the "hooking" process.

Constitutional measures must not be neglected.

Umbilical Hernia.—Another disorder which requires prompt remedying often comes to light only while in pursuit of a proper routine examination of children is umbilical hernia. It is a safe rule, one which, indeed, it is unsafe not to follow, to invariably inspect the throats of all such sick children, look at and handle the abdomen and auscult the chest. These umbilical hernias, no doubt, do many times disappear spontaneously. Also

a patulous or feeble infantile ring may and does suddenly weaken more and ventral hernias result which fail to fix maternal attention and yet are sources of peril. You will have noted in the children examined by you with me here a large number of these appearing which had entirely escaped notice of mother or nurse; or had been observed, but of which it was comfortably predicted that it would get all right in time, in the same breath admitting that the outward pouting was distinctly greater than of late. Inguinal hernias, happily, excite much more comment. The treatment we use nowadays is beautiful in its simplicity compared with that until quite recently obtaining, when a large button or half rubber sphere was fixed against the hernia—too often acting as a widener of the already separated edges of the ring. Indeed, I refer to this because it is highly probable that there are yet many good doctors who, partly from over surgical zeal, continue to use that cumbrous, uncomfortable and usually inefficient method. Better results are had by the simple device of taking a four-tailed strip of adhesive rubber plaster and fixing this over the hernia so that the tails radiate out from it, reaching well beyond the lateral mid line of the body. The mode of procedure is as follows:

The child is to be laid on its back, knees drawn up. The operator then gathers, with finger and thumb of both hands, a long vertical fold of skin from each side of the abdomen, and with the forefingers pressing the central mass down over the navel, at the same time drawing the lateral folds over this meeting above. Thus are the sides of the abdominal surfaces

brought in closer apposition above, and more or less so the deeper structures, and the redundant tissue forms a soft pad over the lesion which has some possible value in keeping the protrusive mass in check. Next, this is fixed by the four-tailed plaster strip, which, by being well beyond the upright line of the side and spreading above and below, is thus firmer to stay and more comfortable. This dressing admits of free activities and free tubbings. It is well to replace it once a week, and it is usual to find all trace of the weakness to have disappeared in a month or two.

Blood Dyscrasia Following Erysipelas Complicated by Extensive Subcutaneous Nævus.—As illustrative of the importance of careful observation and close questioning, this child teaches a good lesson. This boy of nine months comes to-day for the second time, brought by a "neighbor," the mother lying ill at the University Hospital of heart disease. Little or no history could be elicited from the worthy caretaker, except that the infant, though plump, was "pining away" steadily. So much was obvious, likewise a deathly pallor which suggested a profound anemia. The heart-sounds indicated no marked abnormalities then, and the urine proved free from albumin or casts. One ear was much thickened, and the surface thereabout desquamating actively. Cross-questioning revealed the important fact that a few weeks ago the nurse had been an aged crone who suffered from erysipelas, and that in and about an eczematous fissure at the junction of the ear and head of

the child a redness appeared, lasting some days, during which the whole side of the face presented the flushed, swollen appearance of erysipelas. From that time the poor little thing grew rapidly weaker and paler, till now it is fair to assume the extreme pallor indicates a blood dyscrasia due to this. Again, as the child lay across the woman's knees while adjusting the clothing, so feeble was the neck that the head hung dependent some little time, and I observed a curious bluish mottling of one side of the face to such a degree that I first feared that death was imminent. However, this steadily grew less on being held erect, and no special change occurring in the heart action or respiration, I again placed the head as before, and the mottling returned in even greater degree without marked alteration in circulatory rhythm. This proved, in short, to be an already-observed feature by the attendant, who had not seen fit to mention it, describing it further as much more marked before the child became so pale, and also then noticeable while sitting upright. Close inspection shows an extensive subcutaneous nævus, involving the left side of face and neck.

The boy has been for a week on peptonized milk and Bosham's mixture, and is greatly improved in vigor.

[Unfortunately, soon after this, broncho-pneumonia supervened, and death ensued. I saw the body, but could not secure an autopsy. The nævoid area was well shown by dark cyanosis, and the tissues were like white wax.]

SOCIETY PROCEEDINGS.

New York Academy of Medicine—Section on Pædiatrics.

DR. HENRY D. CHAPIN, CHAIRMAN.

Meeting of October 12, 1893.

THE committee appointed in May to formulate rules for the guidance of dairymen for the proper care, handling and transportation of milk reported as follows :

It having been conclusively demonstrated that a great and dangerous source of contamination of milk comes from dirt and filth from the cow's coat, bag and udders, and from the milkman's hands, it is especially requested by a committee appointed by the Pædiatric Section of the New York Academy of Medicine, that dairymen see that all visible dirt be removed from the cow's coat immediately before each milking, and that the bag and udders be cleansed at the time of milking, and that the milkmen wash their hands thoroughly with soap and water before milking. Antiseptic surgery has proven that absolute cleanliness is a preventive of germ contamination. Milk is a most fertile fluid for germs of all kinds when they have once gained access to it. By means of absolute cleanliness in the manner already indicated, the most prolific source of disease from contamination will be avoided.

Again, it is an established fact that numerous epidemics of contagious diseases in cities and towns have originated from infected milk, such

epidemics having been frequently traced to the milk. Infection of the milk in these cases is generally due to the milkman being in attendance on some patient with contagious disease at the time, or in his handling or cleaning cans or jars in which milk is to be transported, or from the sick themselves performing the same duties, either at the outset of an illness or during convalescence. Still another common source of infection is from washing the cans and jars in impure water. Creek water should be regarded as dangerous for the cleansing of vessels which are used for the transportation of milk. It is, therefore, urged that only spring or pure well water be used for washing all milk utensils.

We urgently appeal to the dairymen to assist us in preventing this great source of disease and death from the one and only proper food of infants and young children.

If farmers would put into practice these simple suggestions, they would soon drive from the market all "infant foods" which are now so largely sold at enormous profits.

He referred to the laboratory established in Boston by the agency of Dr. Rotch, a branch of which has very recently been opened in New York.

He spoke of the sources from which the milk of this laboratory is obtained. Morning's milk is received two hours after the milking, thus fulfilling the first great requirement, freshness. It is obtained from a dairy under strict medical supervision, where every precaution is exercised to produce clean, pure milk. Cows receive the most careful attention as regards their feeding, stabling and bedding, no diseased cow being allowed to remain in the herd. Having arrived at the laboratory in glass jars, the first act of modifying is to pass through the centrifugal machine, which removes the cream with the least possible force, the speed being 4400, that of the average centrifugal machine being 6800. We thus obtain :

- (1) Cream (16 per cent. fat).
- (2) Milk free of fat and impurities.

For modifying the milk the following preparations are used :

- (a) Cream of stable percentage.
- (b) Clean fresh milk without fat.
- (c) Milk sugar solution (20 per cent.).
- (d) Distilled water.
- (e) Lime water.

The author then described the practical working of this system by a detailed account of several cases. The laboratory furnishes prescription blanks by which the physician is to order diet with as much accuracy as he orders treatment. Spaces are provided upon one side to be filled out with the required amount of fat, milk, sugar, albuminoids and animal matter. Upon the other side are directions as to the number of feedings, amount of each feeding, infant's age and weight. For a child of six months with an acute indigestion the following percentages of fats, sugars

and albuminoids were used, 4, 6, 1. A few days later they were increased to 4, 7, 2. For a new-born infant what was designated as "light breast milk" was prescribed, of the following strength, 3, 6, 1. The average high-grade breast milk is of the following percentages, 4, 7, 2. It was not affirmed by the author that every child would thrive upon the same formula. The object of the laboratory was to furnish exact means of prescribing diet, so that in case one formula does not agree with the child the physician can with certainty change to a lighter or heavier food.

To test the amount of dirt which enters milk at an ordinary milking, he tried the following experiments: Three Petri plates containing nutrient gelatine were exposed for two minutes each, the first out of doors, the second in the barn and the third under a cow which was being milked. Thirty six hours afterward, these plates showed colonies of bacteria as follows :

Out of doors, 6.

In the barn, 111.

Under cow, 1800.

During an ordinary milking, therefore, with a pail of ordinary size, 126,000 germs would enter the milk. Many of these microbes are harmless, but their presence in the milk is a danger for several reasons. They are an indication of dirt and dirty methods of treating a delicate food substance.

The average milk when it reaches New York is from twenty-four to forty-eight hours old. One train which brings milk to the city 300 miles is eighteen hours under way. Some of the milk is twelve hours old when it is started. It reaches New York in the night, and is distributed from six to twelve hours later. Another train

runs 160 miles in twelve hours, averaging fourteen miles an hour. As a rule milk trains are very slow. It is a common custom to retain one milking on the farm until the next milking, the whole being shipped five to ten hours after the last milk is drawn. The matter may be difficult to control in all cases, but one reform which should be demanded is the prompt and rapid transportation of milk from the cow to the consumer.

Dr. E. C. Wendt spoke of the favorable results he had obtained from the use of modified milk by prescription, especially in children who had been overfed and showed marked distention of the stomach.

The injurious practices which are common at the dairy are numerous, and are found at every step of production from the breeding of the animal to the treating of the product. These have resulted largely from the commercial expedients of dairy farmers. We have to contend with the evils of inbreeding, improper housing and care, improper food and water, careless collecting, handling and cooling, and a total disregard of the delicate nature of milk in its transportation. In order to fulfil the need of infancy and childhood in the present state of our knowledge, three conditions of purity in cow's milk must be attained:

(1) Absence of micro-organisms, especially the pathogenic varieties.

It is probably true that no other medium offers the material causes of a greater variety of disease than cow's milk. Human tuberculosis is largely due to our association with the bovine species. It is a fact that in 30 per cent. of the dairy herds in the United States one or more cows are tuber-

culous. If there is a vital principle in cow's milk, as some maintain, it is certainly not due to germs, for breast milk and cow's milk are naturally sterile fluids. Absolutely germ-free cow's milk has not yet been attained.

(2) Constant resistance to change during sixty hours after it is drawn.

While the lactic fermentation cannot be prevented even by the greatest care, neglect will cause it to occur much earlier. To prevent the growth of bacteria is to insure its keeping qualities. This is best attained immediately after collection by quickly reducing the temperature to 40° F. and maintaining it at this point until used. Thus treated it will keep several days.

(3) A constant and unvarying nutritive value in its composition.

This must be brought about by intelligent feeding of the animal. Upon this point but little has been done. Much remains to be accomplished.

To secure all that is desired in cow's milk, viz., freedom from bacteria, reliable keeping qualities, and uniform nutrient value the writer submitted the following plan. This plan is about to be put into practical operation in New Jersey, the contracts being already signed. It includes three general requirements:

(1) That physicians give their practical support to labors conducted by a commission of medical men who shall endeavor to procure a supply of milk produced under such regulations that purity may be assured.

(2) That approved and trustworthy dairymen, possessing honor, financial ability, and dairy facilities shall be induced by reason of medical support and the increased price of their milk to conduct their dairies according to

a code made by the commission and imposed in legal form. These contracts shall be binding, and shall include provision for the compensation of the experts employed by the commission. It shall control the whole question of feeding, and shall determine the construction and drainage of buildings. It shall provide for a pure water supply and require perfect cleanliness in the stable. It shall disallow the keeping of all animals except the cow within 300 yards of the dairy. It shall regulate the breed of the animals, and make sure that they are in perfect health, every animal in ill health being at once removed from the herd. It shall provide for the proper handling, housing and grooming of the cows and the prompt removal of waste products.

It shall govern the collection and handling of the milk and require cleanliness as it is viewed from the standpoint of the physician and sanitarian. It shall carefully govern every step in the preparation of milk for shipment.

(3) The commission shall provide for frequent expert examinations of the stock, and for chemical and bacteriological tests of the milk. The experts (consisting of chemist, bacteriologist and veterinary surgeon) shall report to the commission in writing and a certified copy of the report shall be sent to the owners of the dairy. These certificates shall constitute the milk, "Certified milk." This certified milk shall be sold in quart containers bearing the name of the producers and date of milking. This milk being designed especially for clinical purposes the certificates shall be limited in circulation to the medical profession.

Dr. H. Koplik spoke of the difficulty often experienced by the infant in assimilating the albuminoids of cow's milk which were quite different in character from those of breast milk. Simply regulating the quantity does not always accomplish the desired end. Sterilization is always to be advised unless the milk can be obtained especially fresh and pure. The lower the degree of heat that can be used for this purpose the better.

Dr. L. Emmett Holt said that babies differed greatly and could not be fed according to a single rule. We must provide for indications as they arose in feeding as well as in treatment. The great advantage of the milk laboratory described by Dr. Northrup lay in the fact that we could do just what we wanted to. We could obtain the exact proportions we desired. If they did not succeed, they could be changed to other definite percentages. Cream and milk were variable in their composition. Some cream contained 18 per cent. fat, others 35 per cent. With this uncertainty, certainty in feeding could not be attained. By aid of the laboratory, if one proportion did not succeed, one of another definite strength could be made. It was not expected that a definite rule could be made for the preparation of milk for every child. Several wet nurses were sometimes tried before the proper one was found. We must find out the range of each. He had recently reduced the percentages of albuminoids and frequently began feeding with low strength, the fat, sugar and albuminoids, being of the percentages 3, 5, 1-2. A most important point was the avoidance of overfeeding.

The Chairman said that he used less fat than most of the speakers approved, his percentages being frequently 1, 6, 1.

Dr. J. E. Winters had used modified milk in twelve cases and with

most satisfactory results. He began with low strength fat and albuminoids, his percentages frequently being 2, 5, 1. He had frequently given but one-half of 1 per cent. albuminoids.

ABSTRACTS FROM CURRENT LITERATURE.

Embolism Following Diphtheria.

ROONEY (*Occidental Medical Times*, Vol. VII, No. 4,) reports a case of embolism of the popliteal artery, occurring after an attack of diphtheria in a girl, aged 7. Although albuminuria complicated the diphtheria, convalescence was established after twelve days. About three days later, the child suddenly cried out, clasped both hands over the præcordia, and appeared moribund; dyspnœa was marked; the surface of the body pale, cold, and covered with perspiration. The child emerged from this condition, but complained of pain in the umbilical region, and of coldness and

numbness in the lower extremities. Despite hot applications, the left leg below the knee remained cold, pale and shrunken. The limb was flexed, and the patient complained of severe pain in the toes. The diagnosis of embolism was made. As the child became rapidly emaciated, and a bed-sore formed, amputation of the limb was performed, with ultimate recovery. Subsequent dissection of the amputated limb revealed an embolus an inch and a quarter long, in the popliteal artery, just above its division into the anterior and posterior tibial branches.

Whooping-cough.

THEODOR (*Archiv. für Kinderheilkund*, Vol. XV, Parts v to vii), in the observation of 353 cases of whooping-cough, draws the following conclusions, which are somewhat different from those commonly held. He has seen five cases with undoubted second attacks of the disease. His cases did not principally occur in the winter and spring, but were spread indis-

criminate over the whole year. In his series 25 per cent. were under 8 months, in opposition to Eichart's view that the disease is rare under 6 months.

The medication used chiefly was a combination of bromoform and anti-pyrine. He also used extract of hyoscyamus. The mortality was small, except in children under 3 months.

The Etiology of Gastro-intestinal Hæmorrhages in Young Children.

HERGOTT (*Rev. méd. de l'Est*, July 15, 1893) reviews the various hypotheses offered by different authors in explanation of gastro-intestinal hæmorrhage in young children. In the majority of cases in which he had made a post-mortem examination no special causal lesion could be found.

He relates one case, however, in which all the organs were normal except the heart, which revealed a notable lack of development in the left ventricle. In this particular case he believes that the cardiac anomaly was a sufficient cause of the hæmorrhage.

Aphasia in Childhood.

TREITEL (*Fortschritte der Med.*, September, 1893; *Sammlung klin. Vorträge N. F.*, No. 64, 1893) in speaking of aphasia in children divides it into the congenital and acquired. He does not include congenital deficiencies of the organs of speech and hearing among these, and understands throughout that they are normal. Congenital aphasia, though seldom complete, is mostly dependent upon weakness of memory, psychical anomalies, or a lack of irritative power, while heredity may play its part in producing it.

The difference is marked between congenital and acquired adult aphasia; in the one there is loss of memory and power of speech which has never been present in the other. The congenital form is more frequently observed in boys. In differential diagnosis the question of idiocy and deafness arises, and never is the diagnosis an easy one. The inability to hear does not preclude the power of learning to speak; it is, however, always questionable. Acquired aphasia he divides into that (1) arising from stuttering; (2) the hysterical; (3) the reflex; (4) the choreic. All forms are generally neurotic in their

origin. The stuttering is often mild in character and passes quickly away. The hysterical is often sudden in its onset and lasts but a short time, disappearing as suddenly; it is, however, common in childhood. The reflex is oftenest observed in conjunction with intense psychical disturbance, as intense grief, fear, etc. The choreic shows itself in the cramps of the muscles of speech, and is centric in origin. Besides these there are those forms due to loss of memory, caused by epileptic attacks and disturbance of the brain or acute infectious disease, as typhoid fever. In these the prognosis is not unfavorable if there are no organic lesions, and the duration is only one to three weeks. Traumatic lesions of the brain are usually followed by stuttering for some time. Aphasia due to apoplectic seizure can only be certainly diagnosed when there is an accompanying hemi- or mono-plegia. It is frequently recovered from, and even where the left side is permanently affected the right may take up the function for it. The treatment of aphasia is like the treating of the deaf, and is mostly psychical.

The Feeding of Infants.

HAUSER (*Berlin. klin. Woch.*, August 14, 1893) speaks of the successful use of a new method of feeding infants. He has used in Henoch's clinic and elsewhere, a preparation of cow's milk, introduced by Rieth, in which, after cream and milk sugar have been added to make up for the deficiency in these substances, egg albumen, heated above 130° C., is also added to supply the deficiency in albumen. The preparation has the same composition as woman's milk and is called albumen milk. When cow's milk, properly prepared and sterilized, does not agree with the child, the author substitutes this preparation. He employs it in two classes of cases, first in those in whom

the cow's milk is well received, but who do not thrive, and secondly, in those who have impaired digestion. Some sixty infants were treated with this preparation, and the author has now used it for one year and a half. The infants take it well, vomiting ceases and the weight increases. In bad cases it is given cold and in small quantities. The stools become regular and healthy, but are often offensive from the sulphur in the albumen. The preparation is also useful in acute diseases, rickets and other disorders attended with malnutrition. As the children grow older cow's milk may be added to the albumen milk until, at length, the former is taken pure.

Double Empyema in a Child of Four Months.

CASSEL (*Deut. med. Woch.*, August 10, 1893) reports a case of double empyema in an emaciated child, aged 4 months, who was thought to have had an attack of influenza. On the left side near the angle of the scapula there was typical bronchial breathing, and from this point downward, on both sides of the chest, there was dulness on percussion and feeble respiratory sounds on auscultation. No abnormal signs were detected arterially; the apex-beat was not displaced. An incision was made on each side of the chest in the sixth interspace, and three-quarters litre of pus evacuated on the right, and one-third litre on the left side. Improvement followed

the operation, but as it was not maintained, resection of the rib was practised. The child died a little later. On post-mortem examination adhesions were found between the pleuræ at all points except over the empyemata. On the left side a cavity was found which communicated with the pleural sac. Tuberculous foci were found through both lungs. Double-sided pleurisy is not so very rare. The only treatment here indicated was opening the chest. Tuberculosis may, however, be a contra-indication. At such an age the diagnosis of pulmonary phthisis is necessarily very difficult.

Acute Nephritis Following Varicella.

CASSEL, in the *Deutsche medicinische Wochenschrift* for March 10, 1893, states that he has looked for this complication in over 200 of his own cases, with the result of finding in but one instance. The patient was a girl, aged 4 years, with no history of previous infective disease, who passed through an ordinary attack of varicella. About the twelfth to the fifteenth day symptoms of acute hæmorrhagic nephritis appeared. The face became oedematous, and the urine contained much albumin and blood. There was considerable gastric disturbance and constipation. The temperature was 39° C. The other organs were healthy. The severe symptoms lasted about a week, and then rapidly

declined over a period of twelve days. Recovery was complete. There was no reason to believe that the attack was an acute exacerbation of chronic nephritis. In twenty-five reported cases there have been all grades of severity; the complication has developed from the fifth to the twenty-first day of the varicella, and lasted twelve to twenty-four days. Three fatal cases have been noted, and in these the pathological changes were similar to scarlatinal nephritis. As a prophylactic measure, Cassel recommends that children should remain in bed for a few days, even in the mildest attacks, and should not leave their room for a week.

Treatment of Vesical Calculus in Boys.

POUSSON (*Gazette hebdomadaire des Sciences Méd. de Bordeaux*, No. 24, 1893) reports a case of cystotomy for calculus in a boy, aged 11, and forms the following conclusions from a study of the literature on the subject:

(1) Surgeons differ upon the comparative value of the supra-pubic operation and lithotrity in children. In France cystotomy is preferred to crushing, and the statistics of the latter operation, though quite favorable, are somewhat misleading from the diversity of their sources.

(2) The size of the urethra in the child, which is still undetermined with certainty, is the most serious objection to the general adoption of

lithotrity at this period of life.

(3) The supra-pubic operation is essential in children on account of the position of the bladder and the dangers of injuring the ejaculatory ducts, which all perineal operations render possible.

(4) Ballooning the rectum is sometimes troublesome, and even dangerous; a sponge in the bowel is sufficient to keep the bladder in position.

(5) It is possible in children, after suture of the womb, to obtain union of the bladder by first intention. In these cases it is always advisable, if not absolutely indispensable, to employ the retained catheter.

An Analysis of Seventy Cases of Ununited Fracture in Children.

POWER (*Medico-Chirurgical Transactions*, Vol. LXXV) says ununited fractures of the long bones are rather uncommon. Of 150 cases of fracture reported by Norris only one was found; 484 cases reported by Gurlt, only fourteen were found; 685 cases reported by Agnew, only twenty-eight were found. The author divides all cases of ununited fracture into three classes:

(1) Those fractures produced in utero or immediately after birth. (2)

Those produced by slight traumatism.

(3) Those resulting from osteotomies.

Spontaneous fracture is very uncommon in children.

The analysis of the seventy-two cases showed there were six of the clavicle, seven of the arm, twelve of the thigh and forty-five of the leg.

In twenty-one cases there was subsequent consolidation, four were improved, and forty-five remained ununited.

Local Treatment of Diphtheria.

SIMON (*L'Union Médicale*, June 3, 1893) has employed the following application with considerable success in the treatment of diphtheria:

R. Salicylic acid, gr. xv;
 Infusion of eucalyptus,
 Glycerin, of each, ℥iss;
 Alcohol, enough to make a solution.

After applying this thoroughly to the affected parts he subsequently paints them with a solution of perchloride of iron and glycerin, in equal parts. He also employs in conjunction with this treatment irrigation of the nose and mouth, using a solution

of boric acid or a 1 per cent. aqueous solution of carbolic acid. He also believes it advantageous to vaporize a decoction of eucalyptus leaves or a solution of thymol and water. For fissures and cracks of the lips and gums and for the inflammation following the removal of the pseudo-membrane, he uses the stick of silver nitrate to effect rapid healing. If cutaneous inflammations follow diphtheritic inflammation, he uses tincture of iodine or an alkaline solution of iodoform.

PLATE I.



IRRIGATION OF THE NON-PUERPERAL UTERUS. INSTRUMENT IN POSITION.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

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No. 3

ORIGINAL COMMUNICATIONS.

Irrigation of the Non-puerperal Uterus.¹

BY FRANK W. TALLEY, M.D.,

Instructor in Gynæcology, Philadelphia Polyclinic.

For more than a score of years irrigation has been used by surgeons as a valuable means for treating inflammation in their wounds, and the use of heat has been appreciated both in the form of poultices and compresses, in treating acute inflammation of the tissues. Those surgeons who deal with chronic inflammatory conditions of the mucous membranes of the cavities of the body, as the nose and throat, have long ago recognized the advisability of cleansing the membrane of its altered secretions, by means of washing with alkaline solutions, prior to the application of alterative remedies. Irrigation of the uterus after labor or abortion, as a means of attacking septic

infection, has proved a valuable procedure. I wish, therefore, to ask your consideration of the irrigation of the non-puerperal uterus, as a means of treating inflammatory conditions of this organ, and as an adjuvant to the treatment of inflammatory conditions of its lining membrane.

The instrument required for this procedure is a small canula, slightly bent at its uterine end to facilitate introduction, perforated at the end and sides, allowing the escape of the irrigating fluid in every direction, and provided with two pieces of wire soldered to its side, so that a space may be preserved between the canula and the uterine wall, permitting the return flow of the fluid, and providing for the washing of the mucous membrane of the uterine body and cervix throughout

¹ Read before the Obstetrical Society of Philadelphia, November 2, 1893.

its course. The instrument has been made of such a size that it will just pass through a No. 15 French catheter scale.

For the carrying out of this procedure in ambulatory patients a speculum has been provided, having its lower valve guttered and possessing a funnel on its distal end, to which a rubber tube may be fastened, draining into a slop jar placed at the foot of the examining table. With such an apparatus the danger of wetting the patient's linen is avoided.

The fluid used in the irrigation consists of a solution of one drachm bicarbonate of soda, and thirty grains of carbolic acid to the quart of water, at 110° F. From two to four quarts of such solution are used.

ment is gently passed into the uterine cavity.

The weight of the syringe tube may now be supported by passing it over the patient's knee, and the patient left with the nurse until all the solution has passed through.

If necessary to scarify the cervix this may be conveniently done before introducing the canula, when the stream of the wash-water will carry the blood with it into the vessel under the table.

After completing the irrigation the flow is stopped, and the canula allowed to remain in place for a few seconds, until all the fluid remaining in the uterus has drained off before withdrawing it. Uterine colic is thus avoided.

FIG. 1.



In performing the irrigation the patient is placed in the dorsal position upon the examining table. A two-quart fountain syringe filled with water at 110° F., to which the bicarbonate of sodium and carbolic acid have been added, is hung upon the wall or other convenient support about seven feet from the floor. The funnel speculum is then introduced with its rubber tubing dipping into a slop jar at the foot of the table. The cervix should be mopped with a solution of carbolic acid 1:40 in order that no septic matter may be carried into the uterus with the canula. The stream is allowed to flow through the canula until the cooler water in the syringe tube has been run off, and all air has been excluded, and then the instru-

The primary effect of heat upon the tissues is the production of a filling of the capillaries by vaso-motor dilatation. If persisted in this gives place to vaso-motor constriction by which the capillaries are emptied and the tissues blanched. These changes may be noticed in the hand immersed in hot water, which at first red with arterial blood, soon becomes blanched and shrivelled. In order, therefore, that the desired result be obtained in the treatment of uterine inflammation by irrigation with hot water, the treatment must be continued until the primary effect has been overcome. Experience has shown that the irrigation with two quarts of solution which extends over six minutes is usually long enough. Not

only is this effect produced in the tissues of the uterus, but the thick and tenacious muco-purulent discharges from the diseased endometrium are dissolved and loosened in the alkaline solution, partly escaping in strings from the cervix, and leaving a clean mucous membrane for the application of the alterative remedies.

The conditions applicable to the treatment by this method are endometritis, metritis and subinvolution.

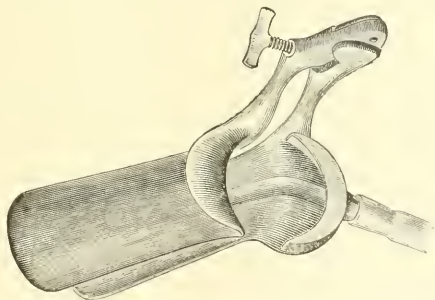
During the last ten weeks I have used this method of treatment in the Out-patient Department of the Penn-

sylvania and Howard Hospitals, through the kind permission of Drs. T. Hewson Bradford and Baldy, and at the Polyclinic Hospital. In this time I have irrigated the uterus more than 100 times. Only twice was mild uterine colic experienced, and on these occasions as a strong solution of nitrate of silver had been subsequently introduced into the uterus the cause of the colic was apparent. One case complained of a slight nausea after the irrigation, and at the next sitting the carbolic acid was omitted from the solution, and no nausea was occasioned. As a result the patients experience an almost immediate relief from

those symptoms occasioned by the heavy engorged uterus, and their recoveries are very greatly facilitated.

As an adjuvant to intra-uterine medication irrigation occupies a valuable place. The remedial agent introduced into the uterus, and poured out from the syringe into a mass of mucous and pus, reaches but imperfectly, if at all, the seat of disease. It is this mass of tenacious mucous and remedy which occasions the uterine cramp so frequently met with after the use of the intra-uterine syringe, by the efforts of the uterus at its expulsion. This I have proved in cases in which

FIG. 2.



sylvania and Howard Hospitals, through the kind permission of Drs. T. Hewson Bradford and Baldy, and at the Polyclinic Hospital. In this time I have irrigated the uterus more than 100 times. Only twice was mild uterine colic experienced, and on these occasions as a strong solution of nitrate of silver had been subsequently introduced into the uterus the cause of the colic was apparent. One case complained of a slight nausea after the irrigation, and at the next sitting the carbolic acid was omitted from the solution, and no nausea was occasioned. As a result the patients experience an almost immediate relief from

violent colic would be produced by the injection of iodine into the uterine cavity, and in which, subsequently, after irrigation, the injection of iodine, followed again by irrigation, washing away of the excess of iodine, no discomfort has been produced.

In conclusion, I believe that irrigation of the uterus will prove a valuable factor in the treatment of inflammatory diseases of this organ, and am convinced of the lack of danger of producing uterine colic by its employment in cases adapted to its use, when the precaution has been taken to allow the uterus to empty itself before withdrawing the canula.

Report of Two Years' Work in Abdominal Surgery at the Kensington Hospital for Women, Philadelphia.¹

BY CHARLES P. NOBLE, M.D.,
Surgeon-in-chief.

THE following report embraces all the cases of abdominal section done in the Kensington Hospital for Women during the past two fiscal years. I shall briefly discuss the general features of the work and then confine myself to certain points which I believe are of general interest. There have been ninety-nine cœliotomies, of which ninety-seven have been done by myself and two by the assistant surgeon of the hospital, Dr. Applebach. There have been five deaths, and it is gratifying to be able to show that not one of these was due to infection on the part of the operator. The rule has been followed in these cases to operate for disease only, and a study of the annexed tables will show that almost without exception the patients were suffering from gross lesions. This method commends itself to all operators of sound judgment, as thereby there will be no future regrets because of the removal of organs not hopelessly diseased. The operations were done because the women were invalids and incurable otherwise, or else to save them from impending death.

CLASSIFICATION OF CASES.

<i>Ovarian Cysts.</i>	
Single	5
Double	1
Single malignant	6
Double malignant	1—13

Dermoid Cysts.

Single, on left side	1
Double	1—2

Ovarian Cyst

Complicated by hydrosalpinx	2
“ “ pyosalpinx	2
“ “ salpingitis and pelvic adhesions	6
“ “ pregnancy	2
Suppurating	1—13

Retroflexion.

Retroflexion	1
Complicated by varicoele of broad ligaments	1
“ “ double salpingitis and pelvic adhesions	6

Pyosalpinx.

Single	2
Double	10
With abscess of one ovary	1
With abscess of both ovaries	2—15

Chronic Ovaritis and Salpingitis.

One side	4
Both sides	6—10
Double salpingitis, oöphoritis, with dense adhesions	1
Hæmatoma of right ovary, cirrhosis of left	1
Salpingitis, cystic ovaries, endometritis fungosa, metrorrhagia	1
Hypertrophic cystic degeneration of ovaries	2
Double salpingitis with adventitious cyst	1
Pertyphlitic abscess	1
Stone in left ureter (accidental cœliotomy)	1
Uterine fibroids	6
Fibro-cyst of uterus	1
Fibro-sarcoma of uterus	1
Myxomatous degeneration of uterine fibroid	1
Small fibroid, right ovarian cyst, left ovaritis	1
Left pelvic cellulitis (puerpera!)	1

¹ Read before the Obstetrical Society of Philadelphia, November 10, 1893.

Enlarged liver	1	Hysterectomy	4
Ventral hernia	5	Herniotomy, inguinal	1
Incarcerated inguinal hernia	1	" ventral	5
Femoral hernia	2	" femoral	2
Ruptured tubal pregnancy	1	Evacuation of perityphlitic abscess	1
Tubercular peritonitis	1	Irremovable sac of suppurating	
Tubercular peritonitis—double pyosal-		malignant ovarian cyst	1
pinx	1	Removal of vermiform appendix	1
Catarrhal appendicitis (recurrent)	1	Elective Cæsarian section	1
Hæmorrhage into left horn of pregnant		Evacuation of fluid, tubercular peri-	
bifid uterus	1	tonitis	1—27
Malignant tumor of kidney	1	<i>Vagino-Abdominal Hysterectomy.</i>	
Epithelioma of cervix uteri	1	Malignant adenoma of cervix	1
Malignant adenoma of cervix uteri	1	Myxomatous degeneration of fibroid	1
Carcinoma peritonei	1	Epithelioma of cervix	1—3
Pregnancy—flat pelvis	1	Total	99
Total	99		

CLASSIFICATION OF OPERATIONS.

One Uterine Appendage Removed for

Cystic right ovary, menorrhagia	1
Right pyosalpinx	1
Ovaritis	5
Ovarian cyst	6
Ovarian cyst, suppurating, compli-	
cated by left pyosalpinx	1
Retroflexion with adherent appen-	
dages	3
Hypertrophic cystic degeneration of	
left ovary	1—18

Both Uterine Appendages Removed for

Uterine fibro-myoma	6
" " complicated by	
ovarian cyst	2—8
Ovarian cyst	3
Ovarian cyst complicated by suppur-	
ation in cyst, or pyosalpinx, or	
salpingitis	10
Pyosalpinx and ovarian abscess	12
Hæmatoma and cirrhosis of ovaries	1
Cystic ovaries, salpingitis, endome-	
tritis fungosa and metrorrhagia	1
Chronic ovaritis, salpingitis and	
adhesions	11
Ruptured tubal pregnancy	1
Retroflexion and adherent appen-	
dages	1
Bilateral cystic degeneration of	
ovaries	1
Dermoid cyst	2—51

Miscellaneous Caeliotomies.

Exploratory incisions	8
Hysterrorrhaphy	2

Deaths.—There have been five deaths in this series of ninety-nine cases. Nos. 2, 21, 57, 89 and 90 have died, or a mortality of five per cent.

There had been eight cases operated on between the beginning of this list and the last death, and there have been four cases in the current hospital year without any deaths; making a total of 111 cases, with five deaths.

No. 2 had a suppurating ovarian cyst, which filled up the pelvis and was universally adherent. No landmarks could be recognized in the pelvis. The tumor presented somewhat the appearance of the pregnant uterus, and, not being able to exclude this supposition, the operation was unfortunately abandoned. Septic peritonitis resulted from leakage from the tumor, causing the death of the patient.

No. 21 had a suppurating ovarian tumor and double pyosalpinx, with tuberculosis of the pelvic organs and of the lungs. She had been confined to her bed for some weeks, and had been emaciating for some months prior to the operation, so that she was in extremely bad condition at

the time of the operation, which was undertaken with the prognosis of a possible recovery by operation, but with certain death at an early day without it. She died on the fourth day, and no autopsy could be obtained. She had had some vomiting, and also some fever, but none of the local signs of a peritonitis. Her death was due, probably, to shock and asthenia, but as no post mortem was made peritonitis could not be excluded positively, although none of its local evidences were present.

No. 57 had a double pyosalpinx, was a confirmed invalid and had been confined to her bed for weeks before her operation. She died within twenty-four hours after the operation without other symptoms than a gradually failing pulse. She had no shock, in the sense of a depressed temperature, when she went to bed; hence, it is difficult to name the cause of her death, which, however, was probably due to shock.

No. 89 died on the sixth day after a vagino-abdominal hysterectomy for epithelioma of the cervix. This operation was a very difficult and tedious one, lasting two hours. It was accompanied, also, by considerable hæmorrhage. Shock was very profound and the patient never reacted fully. She was never entirely rational after the operation, although she could be roused and could answer questions intelligently. There were no symptoms except those of prostration during the six days, except slight nausea on the second day, and a rise of temperature to 101° F. on the third day. The pulse rate varied from 100 to 150. The autopsy showed the peritoneum to be entirely healthy; also that the kidneys were healthy

and the ureters pervious. Sepsis and peritonitis can thus be excluded. The autopsy was not a complete one, so that disease of the brain cannot be excluded positively, but there is every reason to accept a diagnosis of a death from shock and asthenia.

No. 90 was the subject of epilepsy, and had a retroverted uterus with a tender cystic left ovary. The left ovary and tube were removed, and a hysterorrhaphy was done. The patient's temperature remained below a hundred until the evening of the second day, with a pulse of less than 80. She complained, however, of great pain, and was extremely restless. This restlessness increased rather than diminished. During the following night the temperature became 102, with a pulse of 80. The following morning (second day) the pulse was 100 and the temperature 102. This was Wednesday, August 26, the hottest day of the summer. I was summoned to see the patient at eleven o'clock, and found her with a temperature of $105\frac{1}{2}^{\circ}$ F., evidently alarmingly ill. She died within two hours, in hyperpyrexia, in spite of assiduous efforts at refrigeration. The autopsy revealed a healthy peritoneum and no evidence of sepsis. A diagnosis of heat stroke was made by the pathologist and concurred in by myself.

Early Operation.—It is still necessary to urge upon the profession the necessity of early operation in cases of serious disease of the pelvic and abdominal organs. The old policy of palliation and delay until the disease was approaching a fatal termination before resorting to operation, is still claiming its many victims. This policy is the cause of most of the deaths

in the hands of abdominal surgeons, and also of most of the partial successes which follow operations. The profession has at last accepted the teaching that delay is worse than bad in the treatment of ovarian tumors, and now it is universally conceded that cases of ovarian tumor should be submitted to operation so soon as a diagnosis is made. Tapping, and all other forms of palliative treatment have fallen into deserved disrepute. But this is not the case with pyosalpinx, abscesses of the ovaries, extra-uterine pregnancy and hydro- and hemato-salpinx. There is no doubt in the minds of those who see the most of these conditions, that the proper treatment of them is their early removal by cœliotomy; but this teaching has not been thoroughly accepted by the profession; therefore, the necessity for repeatedly insisting upon it. Without operation it is only by accident that such patients ever become well, and those who do become well run many risks which could be avoided by prompt operation—risks far exceeding those of the operative treatment. Delay in operating in this class of cases, bring these unfortunate sufferers to the condition of chronic invalidism. These are the patients that have been in bed for months or years with repeated attacks of peritonitis; and often under the too prevalent method of management, they come into the hands of the surgeon emaciated wrecks, pus poisoned, with depraved nutrition, and with a shattered nervous system, and, perhaps, with crippled vital organs. These are the patients that die after operation, should this prove difficult and tedious. But worse than that, these are the patients who are not perfectly

cured by operation; nor is it to be wondered at that they are not restored to perfect health. Habits of invalidism when long continued are hard to break up; lost nervous tone is difficult to restore, and emaciation beyond a certain point leaves a permanent impress upon the body. These reasons of a general character for the failure to cure all of these cases are sufficiently apparent; but in addition to them we have the local results of these diseases to contend with. Repeated attacks of peritonitis result in the agglutination of all the abdominal viscera contiguous to the pelvis. Bowels, omentum, bladder and sexual organs become fused together. In cases of suppurative disease the bowels contiguous to the pus sacs are apt to become infiltrated with pus, and their walls to undergo caseous degeneration, thereby giving rise in many cases to the occurrence of fæcal fistula, or to post-operative intestinal adhesions. Such cases when of long standing are especially difficult to deal with. The adhesions have become organized, making them difficult to break up, and also leaving extensive raw surfaces in the abdominal and pelvic cavities. It is not to be wondered at that post-operative adhesions form in some of these cases. When operated upon early the adhesions are not organized, and the exudates will disappear after operation by absorption—and thus the peritoneum is left in a decidedly more normal condition.

The policy of delay works badly in every way. While this policy is pursued these poor women continue to be invalids; many of them die from intercurrent attacks of peritonitis, and those who live on, when finally

they submit to operation, do so with lessened chances of recovery from the operation, and unfortunately, also, with greatly increased chances of but partial restoration to health. It is only by resources of the greatest good judgment and therapeutic skill that many of these poor sufferers are restored to health, by prolonged management after operation.

Yet those who style themselves conservatives take the results obtained in this very class of cases, and use it as an argument against operative treatment. It is due to the cause of truth that it be made plain that it is the teaching of those so-called conservatives which is responsible both for the deaths and the failures to cure in the class of cases under consideration.

The question of early operation in fibroid tumors is likewise of present interest. I can add my testimony to that of others, that the older teaching concerning fibroid tumors is very erroneous. The idea that these tumors are of a harmless nature, or nearly so, that they never cause death, and that they disappear at the menopause, comes grievously short of the truth. It is true that cases of fibroids of the uterus are met with, especially the sub-peritoneal variety, in which there are few symptoms due to their presence; they neither cause hæmorrhage nor pressure; but such cases are exceptions. In the majority of cases women having fibroid tumors are invalids, either because of the hæmorrhages due to the tumor, or because of pressure symptoms. In many cases, also, fibroid tumors are complicated by diseased uterine appendages, and in such cases the women suffer from the symptoms of both conditions.

For some years after I began the practice of medicine, imbued with the teaching of that period, whenever I discovered a fibroid tumor I felt rather pleased, and would assure the patient that she should consider herself fortunate, because as the tumor was not ovarian it would be unnecessary to operate upon her. As my experience increased, however, I discovered that such patients were not so pleased as I was myself; the large majority of them were great sufferers either from hæmorrhage or pain, and this continuing for years made life a burden to many of them. It became apparent to me also, that the teaching concerning the disappearance of fibroid tumors of the womb at the menopause was a mistake. In the first place, the menopause is usually postponed from five to ten years beyond its usual period; in the second place, I have seen numerous cases in which the fibroids grew very rapidly after the menopause; indeed, most of the women upon whom I have been obliged to do hysterectomy had reached or passed the menopause.

I am not yet ready to accept the proposition that every fibroid tumor should be removed so soon as it is discovered, but I am convinced that this plan of procedure would be much better than the one that has prevailed up to the present time. Granted that the rule is that the subjects of fibroid tumors become invalids for many years, even if they do not lose their lives, it follows that, if they can be safely relieved of their tumors, this is urgently necessary to save them from weary years of suffering. It is difficult to estimate the actual danger to life of fibroid tumors, but it is not inconsiderable. If these tumors can

be removed with approximately the same mortality, we have as an argument in favor of such removal, the many years of suffering which will thus be prevented. At the present time hysterectomy is done only for the larger fibroids, and for those which are directly threatening the life of the patient; yet in the hands of our best operators, under these conditions, hysterectomy is done with a mortality approaching five per cent. Were the indication for the operation extended and these tumors removed when still small, I believe this could be done with a mortality of not more than 1 or 2 per cent. This being the case the benefits of operation should be stated to all women having fibroid tumors. I believe that most of them, when fully aware of what is to be expected from operation and without it, will elect to have their tumors removed while they are still small.

Drainage.—My practice with reference to the employment of drainage has considerably altered within the past two years.

Prior to that time I drained ninety per cent. of my cases, hence I am able to speak of the results of drainage from the standpoint of experience. I do not believe that the employment of drainage has ever cost me the life of a patient, and, on the other hand, I am quite certain that it has saved many lives. My reason for employing drainage as a uniform practice was that hæmorrhage had occurred several times in cases where it was unexpected; hence I felt that if I could not tell when to expect hæmorrhage, it was better to employ a drainage-tube in order that I might have notice of its occurrence. The only evil which I can attribute to drainage in my

hands is that it prevents a perfect apposition of the abdominal wound; and, therefore, I believe it is a predisposing cause of ventral hernia. The desire to restrict the number of hernias among my cases has been a strong factor in causing me to abandon the practice of draining all cases. As my experience grew I no longer felt the same fear of unexpected hæmorrhage, and the feeling that in many cases the drainage-tube could do no possible good, and that it was a predisposing cause of ventral hernia induced me to restrict its use to those cases in which I felt that it was advantageous. As it has always been my practice to attend to drainage-tubes myself, I became aware that only exceptionally was much drainage discharged or removed through the tube. This fact has led me to believe that the influence for good of the drainage-tube has been overestimated. At the present time I use the drainage tube for all operations which I believe to be septic, including pus-tubes, hydrosalpinx, ovarian abscesses, etc.; also in all cases in which there have been extensive adhesions, especially if these are of a vascular nature; in other words, I drain all septic cases and all cases which I believe to be septic and all cases in which I expect much leakage after the operation. The results of those who do not employ drainage make it clear that very often in this class of cases patients would recover without drainage. It is true that many cases of pus-tubes and hydrosalpinx are not septic. Whatever germs may have been present have died. In such cases if the organic debris is thoroughly washed away with water, they will recover equally as well without as with drain-

age. But the trouble is that it is impossible to separate non-septic from septic pus cases; hence, as I am convinced by experience that the drainage-tube does no harm except from the standpoint of hernia, I have felt that it was wiser to employ it in all of these doubtful cases. Careful observation, however, has convinced me that the amount of the discharge coming through the drainage-tube has been greatly overestimated. What has been considered as leakage in many cases is nothing more than water which has been poured into the abdominal cavity during operation and not sponged out. While admitting all this upon the negative side of the argument, I am strongly in favor of drainage in bad cases. The worse the case the more necessary is drainage. The healthy peritoneum will absorb a great deal, but the diseased peritoneum of a feeble subject should not be overtaxed, for at times it will fail to do its work, and the result will be a death from septic peritonitis. The first year covered by this report I drained in forty-three per cent. of cases, the second year in thirty-two per cent. Formerly I drained in ninety per cent.

Gauze drainage is of value in certain cases. In incomplete operations and when there are extensive raw and vascular surfaces, I think it is a most useful addition to our armamentarium, but these indications are seldom met with. It is to be used wherever we wish to favor the formation of adhesions, which fact shows that its usefulness is limited, because, as a general statement, adhesions are not to be desired.

Suturing the Abdominal Wall.—During the past eighteen months I

have employed the method of Edebohls in suturing the abdominal wound. Increasing experience with the method convinces me the more of its value; and there is every reason to believe that it will reduce the number of hernias following operation to an inconsiderable percentage. The method is to bury a row of silkworm-gut sutures at the level of the aponeurosis. The skin and subcutaneous fat being pushed to one side, the needle is entered in the aponeurosis, passed through it, through the rectus muscle and the peritoneum upon one side, and in the reverse way upon the opposite side. When the proper number of sutures has been introduced they are tied (three ties to the knot) and the ends cut off short. This brings the parts nicely in apposition, and the sutures remain permanently. A row of superficial sutures now closes the skin. I would advise the use of this method of suturing in all cases in which a drainage-tube is unnecessary. When the drainage-tube is used I do not employ the method as a weak point is left any way; and besides there is some risk of infection of the buried sutures giving rise to stitch-hole abscess. Although I have buried hundreds of sutures in this way, very few have caused irritation or suppuration, and these it was very easy to remove. The method of suturing is especially valuable for fat women.

Tuberculosis of the Genitalia and Peritoneum.—The frequency of tuberculosis of the genitalia and peritoneum is one of the questions which is interesting gynecologists at this time. In the list of cases, a case of tubercular peritonitis is given, also one of tubercular pyosalpinx with tubercular peri-

tonitis. In addition to these cases there was one of suppurating ovarian tumor, with double pyosalpinx, in which, at all events, tubercles were present, if not the cause of the supuration. In other words, three per cent. of all the cases were tubercular. A systematic study of the specimens, macroscopically and microscopically, has not been made, therefore I am not able to say that some cases of tubercular trouble have not been overlooked. In the future I intend to have the specimens from every case of operation for diseased and adherent uterine appendages examined, so as to determine definitely the frequency of tuberculosis as a cause of pelvic inflammation. If further investigation demonstrates that Kelly's statement is true, as a matter of general experience, that twenty per cent. of such cases are tubercular in their nature, this factor will assume an unexpected importance as a cause of pelvic disease in women. I feel that it is important that the point should be settled definitely at an early day.

The Method of Operating as a Cause of Good or Bad Results.—I wish to say a few words concerning the influence of the method of operating upon the results obtained. In my judgment the results of abdominal surgery have suffered very much from the teaching that rapidity in operating is a *sin equa non* in obtaining success. Abdominal surgery has suffered from too much brilliancy. Careful, systematic, well planned work will give the best results. Haste is to be deprecated. Broadly speaking, I have found that when operations have been completed satisfactorily to myself, that my patients have recovered, even though the operation has

been tedious, difficult and involving much manipulation. That which is most important in abdominal surgery is that each step of the operation shall be properly done, so that nothing has to be done over, and that when the last step is completed the patient has been put in a condition for recovery to ensue. Impressed with the teaching that it was essential to complete abdominal sections in the smallest possible space of time, in the beginning of my work I made every effort to work on time, but with increasing experience my desire to finish within a specified time has grown steadily less. Undoubtedly there is a general relation between the length of the operation and its danger, but this relation is by no means definite; the danger depends far more upon what is being done in the time than upon the time itself. Exposure and rough handling of the bowels, injudicious use of ether, and permitting the patient to become chilled, are far more serious matters than the prolongation of the operation for ten, fifteen, or even thirty minutes. Every operator of experience must evolve a technique which is adapted to his own limitations. Aside from what has already been said, certain points will be considered which have proven useful in my hands. Bowel adhesions are separated with great care, usually with finger or sponge pressure, occasionally with scissors when extremely tough. The bowels are at once inspected and sutured, if necessary. Care in the separation of bowel adhesions will reduce the number of fecal fistulæ to a minimum. In over 200 sections I have torn into the bowels but once, and that was a case

in which the bowel walls were infiltrated with cancer. I believe that a great deal of the intestinal work in abdominal surgery, the anastomoses, resections, etc., represent so much careless and hurried surgery. Ten or fifteen minutes spent in separating the bowel adhesions would have saved the supposedly necessary and brilliant operations. Of course, all must recognize that occasionally the walls of the bowels are so degenerated that the most extreme care in separating adhesions cannot prevent fistula, but such cases are very rare, and a careful man will have very few of them.

In enucleating adherent masses from the pelvis, the essential element of speed and success is to begin at a point of cleavage, and to work systematically from that point until the mass is enucleated. Usually it is best to begin at the side of the uterus and to work downward and outward, so as to get under the mass and separate the deepest adhesions first. In cases requiring much manipulation, it is wise to pack sponges so as to shut off the bowels from the field of operation, and thus to save them from exposure and also from contact with the fingers in their manipulations. This procedure will greatly lessen shock in difficult, tedious operations. Hæmorrhage usually can be disregarded until the pedicle is reached, and then controlled by the pedicle ligature; only exceptionally is it necessary to place additional ligatures. The Trendelenburg posture is of service in many cases. When the pelvis is filled up with agglutinated viscera, it is oftentimes

difficult to distinguish tumor, pus tube or bowel, the one from the other. In such cases vision comes to the assistance of touch. In general, I find it easier and better to make the enucleation by touch alone; this doubtless is owing to long training in this method, as it seems rational to believe that vision would be of assistance in such cases. The use of the Trendelenburg posture is also of service when it becomes necessary to search for bleeding points, and in keeping the bowels out of the pelvis when using sutures in the pelvic cavity, as in hysterectomy.

Irrigation and drainage are sheet anchors of safety whenever the pelvis has been soiled by supposedly septic fluids. These procedures, properly employed, never do any harm, and are the means of saving many lives. I never hesitate to sponge the pelvis perfectly dry, unless, indeed, the operation has been very prolonged and the patient much shocked. If it is rational to deprive a patient of water for forty-eight hours after an operation in order to produce systemic thirst, and thus to promote the absorption of fluid from the peritoneal cavity, surely it is irrational to leave that cavity full of water. If the peritoneal cavity is left clean and free from fluid, it has been left as nearly as possible in its normal condition. Adherence to the foregoing principles and the observation of the strictest rules of antisepsis, have enabled me to reduce the mortality in cases of coeliotomy during the past two years to five per cent., although dealing constantly with the gravest cases.

No.	DAT.	AGE	PAR.	MISC.	DISEASE.	CONDITION	OPERATION.	TIME (IN MINUTES)	DRAIN.	COURSE.	TEMP.	UNION	HOSPITAL OR PRIVATE.	RESULT.	DISCHARGED.
1	Mrs. K., October 30, 1891.	36 W.	0	0	Fibro-cyst of uterus	Very bad; chronic bronchitis.	Hysterectomy.	120	None	Stump clipped off on eleventh day.	A.	P., except about pedicle.	H.	R.	December 14, 1891.
2	Mrs. U., October 28, 1891.	28 M.	1	0	Suppurating ovarian intra-ligamentous cyst	Poor	Exploratory section; operation abandoned because the diagnosis of pregnancy was adopted.	30	Yes	Peritonitis	F.		H.	D.	
3	Miss N., November 5, 1891.	30 S.	0	0	Ovarian cyst on left side; Fair	Fair	Removal of both uterine appendages.	35	None	Uninterrupted	A	P.	H.	R.	November 29, 1891.
4	Mrs. B., November 9, 1891.	22 M.	1	1	Pysalpinx and intra-peritoneal abscess.	Fair	Removal of both uterine appendages.	40	3 days.	Uninterrupted.	F.	P.	H.	R.	December 7, 1891.
5	Mrs. McT., December 3, 1891.	M.	0	0	Uterine myoma.	Fair	Removal of both uterine appendages.	35	None	Uninterrupted.	A.	P.	H.	R.	January 1, 1892.
6	Mrs. A., December 6, 1891.	32 M.			Femoral hernia	Fair	Radical operation	25	None	Uninterrupted	A.	P.	H.	R.	January 27, 1892.
7	Mrs. H., December 19, 1891.	40 M.	0	0	Double pyosalpinx.	Good	Removal of both uterine appendages	25	1 day	Good convalescence.	A	P.	H.	R.	January 29, 1892.
8	Mrs. V., January 21, 1892.	48 M.	0	0	Carcinoma peritonei	Poor	Exploratory abdominal section.	25	None.		F.	P.	H.	R.	February 1892.
9	Mrs. V., January 30, 1892.	30 M.	3	0	Hematomia of right ovary; left cirrhotic.	Fair	Removal of both uterine appendages	35	None	Suppression of urine.	F.	P.	H.	R.	February 17, 1892.
10	Mrs. H., February 2, 1892.	26 M.	0	0	Suppurating right intra-ligamentous ovarian cyst; left hydrosalpinx.	Poor	Removal of both uterine appendages; ovarian cyst held one quart of pus.	60	9 days.	Slow convalescence.	F.		H.	R.	February 10, 1892.
11	Mrs. W., February 4, 1892.	22 S.	0	0	Cystic right ovary; salpingitis; menorrhagia.	Fair	Removal of right uterine appendage; left appendage previously removed for same trouble.	20	None	Good	A.	P.	H.	R.	February 24, 1892.
12	Mrs. S., February 15, 1892.	27 M.	1	1	Endometritis fungosa; cystic ovaries; salpingitis; uncontrollable hemorrhage.	Poor	Curetting and removal of both uterine appendages	40	1 day	Good	A.	P.	H.	R.	March 6, 1892.
13	Mrs. J., February 17, 1892.	40 M.	0	0	Fibroma uteri.	Anæmic	Exploratory abdominal section.	25	None	Double ethier pneumonia.	F.	P.	H.	R.	April 1, 1892.
14	Mrs. A., February 23, 1892.	30 M.	0	0	Left pyosalpinx and suppurating intra-ligamentous ovarian cyst.	Fair	Removal of left tube and cyst	150	3 days.	Uncomplicated.	F.	P.	H.	R.	March 6, 1892.
15	Mrs. G., February 25, 1892.	35 M.	5	6	Double pyosalpinx	Poor	Removal of both uterine appendages.	50	3 days.	Convalescence slow.	F.	Supporting wound.	H.	R.	March 25, 1892.
16	Mrs. R., March 7, 1892.	42 M.			Right ovarian cyst containing one gallon of fluid	Poor	Removal of both uterine appendages.	40	None	Uninterrupted	A.	Stitch-hole abscess	H.	R.	April 7, 1892.
17	Mrs. A., April 1892.	40 M.	0	0	Right pyosalpinx	Fair	Removal of right tube	60	2 days.	Uncomplicated.	A.	P.	H.	R.	May 3, 1892.

No.	DATE.	AGE.	M. S. W.	PAR.	DISEASE.	CONDITION.	OPERATION.	TIME (IN MINUTES)	DRAIN.	COURSE.	TEMP.	UNION	HOSPITAL OR PRIVATE	RESULT.	DISCHARGED.
18	Miss G., April 9, 1892.	21 S.	1	0	Double ovaritis; salpingitis with extensive adhesions.	Good	Removal of both uterine appendages.	35 2 days		Uncomplicated.	A.	P.	H.	R.	May 17, 1892.
19	Mrs. T., May 5, 1892.	22 M.	1	0	Right ovarian tumor; left cystic degenerated ovary and adnexa.	Good	Removal of tumor and both uterine appendages.	40 1 day		Uncomplicated.	A.	P.	H.	R.	June 2, 1892.
20	Mrs. O., May 16, 1892.	20 M.	2	0	Right ovarian cyst; left Fair	Fair	Removal of tumor and both uterine appendages	30 None		Uncomplicated	A.	P.		R.	June 12, 1892
21	Miss M., May 19, 1892.	24 S.	0	0	Suppurating ovarian tumor; double pyosalpinx.	Very bad	Removal of tumor and both uterine appendages.	75 Yes.		Patient died from exhaustion; no signs of peritonitis except vomited.	F.			D.	
22	Mrs. T., May 26, 1892.	29 M.	0	0	Ovaritis	Fair	Removal of left uterine appendages.	25 None.		Uncomplicated.	A.	P.	H.	R.	June 26, 1892.
23	Mrs. G., June 16, 1892.	36 M.	5	6	Ventral hernia	Poor	Hysterectomy	35 None		Uncomplicated.	A.	P.	H.	R.	July 12, 1892.
24	Mrs. G., June 20, 1892.	32 M.	0	1	Chronic salpingitis with marked adhesions; ovaritis.		Removal of both uterine appendages.	40 None		Uncomplicated	A.	P.	H.	R.	July 18, 1892.
25	Mrs. N., June 25, 1892.	40 M.	2	0	Chronic ovaritis; salpingitis; dense adhesions; retroflexion.	Poor	Removal of both uterine appendages; hysterorraphy.	45 2 days.		Uninterrupted.	A.	P.	H.	R.	July 27, 1892.
26	Mrs. T., June 25, 1892.	26 M.	3	0	Ruptured left tubal pregnancy.	Fair	Removal of both uterine appendages.	35 None		Uncomplicated.	A.	P.	H.	R.	July 22, 1892
27	Mrs. W., July 4, 1892.	30 S.	0	0	Retroflexion; chronic salpingitis; dense adhesions.	Fair	Removal of left uterine appendage; hysterorraphy.	35 1 day		Uncomplicated.	A.	P.	H.	R.	August 3, 1892.
28	Mrs. B., July 4, 1892.	40 M.	4	6	Double ovarian cyst with small ovario.	Poor	Removal of both uterine appendages.	40 5 days.		Uncomplicated.	A.	P.	H.	R.	July 30, 1892.
29	Mrs. B., July 9, 1892.	40 W.	4	0	Large, soft fibroid.	Worn	Abdominal section; hysterectomy.	75 None		Slow convalescence.	A.	Sloughing from stump.	H.	R.	August 17, 1892.
30	Miss S., July 13, 1892.	25 S.	0	0	Tubercular peritonitis; large effusion.	Bad	Abdominal section and evacuation of fluid.	30 None		Slow convalescence.	F.	P.	H.	R.	August 19, 1892.
31	Mrs. L., July 20, 1893.	52 M.	Nul.	0	Left femoral hernia; tipulation of sac, forming cyst.	Fair	Hysterotomy; removal of sac and cyst; radical operation.	60 None		Uncomplicated.	A.	P.	H.	R.	August 6, 1892.
32	Miss T., July 25, 1892.	30 M.	3	0	Chronic ovaritis and salpingitis; dense adhesions.	Fair	Removal of both uterus and appendages.	40 None		Uncomplicated.	A.	P.	H.	R.	August 3, 1892.
33	Miss L., July 26, 1892.	18 S.	0	0	Catarrhal appendicitis.	Good	Abdominal section; vermiform appendix removed.	35 None		Uncomplicated.	F.	P.	H.	R.	August 23, 1892.
34	Miss M., August 1, 1892.	20 S.	0	0	Right ovarian cyst; double salpingitis with adhesions; hystero-epilepsy	Fair	Removal of both uterine appendages.	35 1 day		Uncomplicated.	A.	P.	H.	R.	September 30, 1892.

No.	DATE.	AGE	M. & F.	Misc.	DISEASE.	CONDITION.	OPERATION.	TIME (IN MINUTES)	DRAIN.	COURSE.	TEMP.	UNION.	HOSPITAL OR PRIVATE.	Result.	Dis-CHARGED.
35	Mrs O., September 20 7 1892.	20	M.	0	1	Large hemorrhage in left horn; bifid pregnant uterus.	Poor	Exploratory section; hamorrhage supposed to be in peritoneal cavity.	30	None	F.	P.	II.	R	September 29, 1892.
36	Miss T., September 19 ber 13, 1892.	19	S.	0	0	Double salpingitis; left ovarian cyst suppurating.	Worm; has been in bed seven weeks.	Removal of both uterine appendages.	50	14 days.	F.	Supp-urated	II.	R.	October 17, 1892
37	Mrs D., September 4 ber 14, 1892.	42	M.	8	3	Tumor of right kidney, malignant.	Fair	Exploratory section	25	None	A.	P.	II.	R.	October 14, 1892
38	Mrs C., September 26 ber 28, 1892	26	M.	0	0	Pregnancy; flat pelvis.	Good	Elective Cesarean section	60	None	A.	P.	II.	R.	October 26, 1892
39	Miss O., October 3, 1892.	23	S.	0	0	Double pyosalpinx.	Poor	Removal of both uterine appendages.	35	3 days	F.	Supp-urated	II.	R.	November 30, 1892.
40	Mrs W., October 4 6 1892.	42	M.	4	0	Tubercular peritonitis; Fair double tubercular pyosalpinx.	Fair	Removal of both uterine appendages.	40	1 day	F.	Supp-urated	II.	R.	November 5 1892
41	Miss R., October 28 12 1892.	28	S.	0	0	Double pyosalpinx	Fair	Removal of both uterine appendages.	35	1 day	A.	P.	II.	R	November 22, 1892
42	Miss E., October 26 21, 1892	26	S.	0	0	Ventral hernia	Fair	Abdominal section; excision of ring, buried silk worm-gut sutures.	45	None	A.	P.	II.	R.	November 22 1892
43	Mrs B., October 33 27, 1892.	33	M.	1	0	Small fibroid; right ovarian cyst, left ovaritis.	Fair	Celiotomy; removal of uterine appendages.	35	None	A.	P.	II.	R.	November 27, 1892
44	Mrs H., October 24 27, 1892	24	M.	2	0	Hernia	Fair	Herniotomy	40	None	A.	P.	II.	R	November 30, 1892
45	Mrs. DeM., No-28 vember 3, 1892.	28	M.	2	0	Chronic ovaritis; left ovary.	Worn	Celiotomy; removal of left uterine appendages.	35	None	A.	P.	II.	R.	December 23, 1892.
46	Mrs G., November 45 ber 12, 1892	45	M.	2	0	Ovaritis; left ovary lightly tubercular.	Worn	Celiotomy; removal of left uterine appendages.	30	None	A	P.	II	R.	December 7, 1892.
47	Mrs H., November 35 ber 12, 1892	35	M.	0	0	Double pyosalpinx	Worn	Celiotomy; removal of uterine appendages.	45	1 day	F.	P.	II.	R.	December 13, 1892
48	Miss Q., Decem-25 ber 6, 1892.	25	S.	0	0	Double pyosalpinx; adhesions.	Good	Celiotomy; removal of both uterine appendages	35	17 days	F.	Supp-urated.	II.	R.	February 4, 1893.
49	Mrs. G., January 28 16, 1893.	28	M.	1	0	Malignant disease of left Fallopian tube; appendage; papillomatous.	Fair	Celiotomy; exploratory	35	5 days gauze.	A.	P.	II.	R	February 14, 1893.
50	Mrs. H., January 34 17, 1893	34	M.	3	0	Ovaritis; right ovary.	Poor	Celiotomy; removal of right uterine appendage.	30	None	A.	P.	II.	R.	February 24 1893.
51	Mrs., January 33 28 1893	33	M.	1	0	Double salpingitis; oophoritis with dense adhesions.	Fair	Celiotomy; removal of both uterine appendages.	30	None	A	P	II.	R.	March 3, 1893.
52	Mrs. K., January 28, 28, 1893.	56	M.	2	0	Retioversion	Poor	Celiotomy; hysterorhaphy	30	None	A	P.	II	R.	March 3, 1893
53	Mrs G., February 2 1893	51	M.	1	0	Uterine myoma tipa- ra.	Poor	Celiotomy; hysterectomy	75	None	A	P.	II.	R.	March 16, 1893

DATE	AGE	SEX	PAR.	DISEASE	CONDITION.	OPERATION.	TIME (IN MINUTES)	DRAIN.	COURSE	TEMP	UNION.	HOSPITAL OR PRIVATE.	RESULT.	DISCHARGED.
54 Mrs. A., February 26 M.	36	M.	0	o Large right ovarian cyst.	Very bad.	Cœliotomy; removal of right uterine appendage	40	None	Uninterrupted.	A	P.	H.	R. March 2, 1893.	
55 Mrs. K., February 28 M.	28	M.	2	o Retroflexion and adherent uterine appendages; left ovary large.	Fair	Cœliotomy; removal of left uterine appendage.	35	None	Slow suppuration in the pelvis.	F.	Suppuration	H.	R. March 31, 1893.	
56 Mrs. U., February 23 M.	23	M.	0	o Retroflexion; universal Fair.	Fair	Cœliotomy; removal of left uterine appendage.	40	None	Uninterrupted.	A	P.	H.	R. March 12, 1893.	
57 Mrs. W., February 26 M.	36	M.	0	o Double pyosalpinx; ex-treme adhesions.	ex-Bad	Cœliotomy; removal of both uterine appendages.	40	Yes	Very sick.	F.		H.	D.	
58 Mrs. W., February 28 M.	28	M.	3	o Double ovarian cysts	Fair	Cœliotomy; removal of both uterine appendages.	40	None	Uninterrupted.	A	P.	H.	R. March 16, 1893.	
59 Mrs. M., March 6, 37 M.	37	M.	2	o Adherent left tube and ovary.	Fair	Cœliotomy; removal of left uterine appendage.	30	None	Uninterrupted.	F.	Suppuration	H.	R.	
60 Mrs. W., March 9, 23 M.	23	M.	2	o Bilateral cystic degeneration of ovaries; metrorrhagia.	Fair	Cœliotomy; removal of uterine appendages; curetting.	35	None	Uninterrupted.	A	P.	H.	R. April 4, 1893.	
61 Mrs. M., March 9, 57 M.	57	M.	3	o Incarcerated hernia; inguinal	Fair	Herniotomy	35	None	Uninterrupted.	A	P.	H.	R. March 22, 1893.	
62 Mrs. K., March 13, 59 M.	59	M.	7	3 Stone in left ureter.	Fair	Cœliotomy (accidental); suprapubic cystotomy; ureterotomy;	40	None	Insanity.	A	P.	H.	R. March 31, 1893.	
63 Mrs. G., March 16, 33 M.	33	M.	2	o Right ovarian cyst; double salpingitis; universal adhesions.	Fair	Cœliotomy; removal of both uterine appendages; hysterorrhaphy.	40	36 hrs.	Uninterrupted.	A	P.	H.	R. April 24, 1893.	
64 Mrs. M., March 20, 18 S.	18	S.	0	o Papillary ovarian cyst	Bad	Cœliotomy; sac wall incorporated with all the viscera; sac wall sewed to abdominal wall.	45	Yes	Slow	F.		H.	R. April 7, 1893.	
65 Mrs. M., March 22, 57 M.	57	M.	3	o Left ovarian cyst; sarcoma of uterus.	Fair	Cœliotomy; exploratory	40	2 days	Uninterrupted.	A	P.	H.	R. April 27, 1893.	
66 Mrs. C., March 22, 30 M.	30	M.	1	o Ventral hernia; post-oper.	Fair	Herniotomy	40	None	Uninterrupted.	A	P.	H.	R. April 17, 1893.	
67 Mrs. J. N., April 6, 40 M.	40	M.	1	o Right ovarian cyst; double salpingitis.	Fair	Cœliotomy; removal of both uterine appendages.	35	1 day	Uninterrupted.	A	P.	H.	R. May 17, 1893.	
68 Mrs. J. P., April 30 M.	30	M.	0	o Retroversion; double salpingitis; dense adhesions.	Fair	Cœliotomy; removal of both uterine appendages; hysterorrhaphy.	35	None	Uninterrupted.	A	P.	H.	R. May 18, 1893.	
69 Miss S., April 20, 35 S.	35	S.	0	o Right ovarian cyst; uterine prolapse.	Fair	Cœliotomy; removal of right uterine appendage; hysterorrhaphy.	40	None	Uninterrupted.	A	P.	H.	R. May 20, 1893.	
70 Miss D., May 1, 25 S.	25	S.	0	o Double pyosalpinx	Fair	Cœliotomy; removal of uterine appendages	45	2 1/2 days	Uninterrupted.	A	P.	H.	R. May 29, 1893.	
71 Mrs. L., May 4, 54 M.	54	M.	9	2 Enlarged liver	Fair	Cœliotomy; exploratory	30	None	Uninterrupted.	A	P.	H.	R. May 23, 1893.	
72 Miss P., May 5, 20 S.	20	S.	0	o Double pyosalpinx; suppurating ovarian cyst.	sup-Bad.	Cœliotomy; removal of both uterine appendages	45	36 hrs.	Uninterrupted.	F.	P.	H.	R. June 7, 1893.	
73 Miss L. K., May 10, 13, 1893.	10	S.	0	o Perityphlitic abscess	Good	Cœliotomy; evacuated abscess	15	2 weeks	Uninterrupted.	F.	P.	H.	R. May 22, 1893.	

No	DAVE	Age	Misc.	DISEASE	CONDITION.	OPERATION.	TIME (IN MINUTES)	DRAIN.	COURSE.	TEMP.	UNION.	HOSPITAL OR PRIVATE.	Dis-CHARGED RESULT.
74	Mrs. P., May 17 27	M.	1	Large right ovarian cyst; five months pregnancy.	Bad.	Celiotomy; removal of cyst.	35 None	Uninterrupted.	A.		P.	II.	R. June 18, 1893.
75	Mrs. McK., May 27	M.	1	Double pyosalpinx; intra-uterine pregnancy.	Fair	Celiotomy; removal of uterine appendages.	30 1 day	Uninterrupted.	A.		P.	II.	R. June 12, 1893.
76	Mrs. M.G., May 19, 22	M.	0	Right ovarian cyst; three months' pregnancy.	Fair	Celiotomy; right ovariectomy.	30 None	Uninterrupted.	A.		P.	II.	R. June 10, 1893.
77	Mrs. A., May 22 23	M.	0	Mult Ovaritis	Poor	Celiotomy; removal of right uterine appendage	30 None	Uninterrupted.	A.		P.	II.	R. June 22, 1893.
78	Mrs. P., May 22 29	M.	0	Double pyosalpinx	Bad	Celiotomy; removal of uterine appendages	45 3 days.	Very sick	F.		P.	II.	R. June 13, 1893.
79	Mrs. K., May 25 38	M.	2	Double salpingitis	Bad.	Celiotomy; removal of uterine appendages.	45 None	Uninterrupted.	A.		P.	II.	R. June 30, 1893.
80	Mrs. F., May 29 22	M.	0	Double ovarian cyst; intra-uterine; papillary	in-Fair	Celiotomy; removal of uterine appendages; three holes in bowels.	60 16 days.	Very sick.	F.		P.	II.	R. July 11, 1893.
81	Mrs. D., May 31 43	M.	0	Mult Uterine fibroma	Fair	Celiotomy; hysterectomy.	75 None	Uninterrupted.	A.		P.	II.	R. July 7, 1893.
82	Miss H., May 31 30	S.	0	Double salpingitis; small left ovarian cyst; pelvic adhesions.	Good	Celiotomy; removal of uterine appendages.	35 2 days.	Uninterrupted.	F.		P.	II.	R. July 8, 1893.
83	Mrs. N., June 26 40	M.	0	Double salpingitis; adven- titious cyst.	Fair	Celiotomy; removal of uterine appendages.	35 None	Uninterrupted.	A.		P.	II.	R. July 21, 1893.
84	Mrs. F., June 26 18	M.	1	Left cellulitis puerperal	Fair	Celiotomy; exploratory.	30 None	Uninterrupted.	A.		P.	II.	R. July 12, 1893.
85	Miss R., June 28 20	S.	0	Left papillary; suppurat- ing ovarian cyst.	Bad	Celiotomy; sac irremovable, was sutured to abdominal wall.	60 Glass 3 Very sick.	gauze.	F.		P.	II.	R. July 16, 1893.
86	Mrs. K., June 29 30	M.	2	Fibroid of uterus; myx-omatous degeneration.	Good	Celiotomy; vaginal and abdominal hysterectomy.	60 None	Uninterrupted.	F.		P.	II.	R. July 26, 1893.
87	Mrs. C., July 6 48	M.	4	Malignant disease of cervix uteri.	Fair	Celiotomy; vaginal and abdominal hysterectomy.	60 None	Uninterrupted.	A.		P.	II.	R. August 6, 1893.
88	Mrs. R., July 10 35	M.	0	Double pyosalpinx	Fair	Celiotomy; removal of uterine appendages	35 2 days.	Uninterrupted.	A.		P.	II.	R. August 26, 1893.
89	Mrs. E., July 23 59	M.	0	Epithelioma of cervix uteri	Fair	Celiotomy; vaginal and abdominal hysterectomy.	120 None	Very sick	F.		P.	II.	D.
90	Miss M., July 24 23	S.	0	Chronic cystic ovaries; epi- lepsy.	Fair	Celiotomy; left uterine appendage removed; hysterorrhaphy.	35 None	Uninterrupted.	Hyp-erpyrexia.		P.	II.	D.
91	Mrs. S., July 31 24	M.	1	Left dermoid cyst with twisted pedicle; small right ovarian cyst.	Fair	Celiotomy; removal of both uterine appendages.	35 1 day	Uninterrupted.	A.		P.	II.	R. September 4, 1893.
92	Mrs. S., August 8 40	M.	0	Right ovarian cyst; morbid solid and cystic; double sal- pingitis; fibroids; uni- versal adhesions.	Bad	Celiotomy; removal of uterine appendages.	40 2 days	Uninterrupted.	Slight fever.		P.	II.	R. September 6, 1893.
93	Mrs. S., August 27 39	M.	0	Fibroids of uterus	Fair	Celiotomy; removal of uterine appendages	30 None	Uninterrupted.	A.		P.	II.	R. October 15, 1893.

No.	DATE.	AGE.	M. S. W.	PAR.	MISC.	DISEASE.	CONDITION.	OPERATION.	TIME (IN MINUTES).	DRAIN.	COURSE.	TEMP.	UNION.	HOSPITAL OR PRIVATE.	RESULT.	DISCHARGED.
94	Mrs. W., August 29 M. 28, 1893.					Retroversion; varicocele of Fair the broad ligament.	...	Celiotomy; removal of the left uterine appendage; hysteror- rhaphy.	30	None.	Uninterrupted.	A.	P.	H.	R.	September 14, 1893.
95	Mrs. T., Septem- 25 M. ber 8, 1893			0	0	Double dermoids of ova- ries; bone outside of tu- mors.	Fair	Celiotomy; removal of both tu- mors.	45	2 days.	Uninterrupted.	A.	P.	H.	R.	October 16, 1893.
96	Mrs. G., Septem- 41 M. ber 18, 1893.			1	0	Salpingitis and retroflex- ion; adherent append- ages and uterus	Worn	Celiotomy; removal of uterine appendages; hysterorrhaphy.	35	None.	Suppuration in abdomi- nal wall.	F.	Suppu- ration.	H.	R.	October 30, 1893.
97	Mrs. McC., Sep- 36 M. tember 18, 1893.			3	0	Hypertrophic cystic degen- eration of left ovary.	Fair	Celiotomy; removal of left uter- ine appendage.	25	None.	Uninterrupted.	A.	P.	H.	R.	October 12, 1893.
98	Mrs. B., Septem- 41 M. ber 7, 1893.			4	6	Post-operative ventral her- nia	Good	Herniotomy	45	None.	Uninterrupted.	A.	P.	H.	R.	October 21, 1893.
99	Mrs. J., October 25 M. 14, 1893.			0	0	Cystoma of left ovary; (good large hydrop. follic. of right ovary	Good	Celiotomy; removal of left uter- ine appendage.	30	None.	Uninterrupted.	A.	P.	H.	R.	October 31, 1893.

Report of a Group of Interesting Cases of Abdominal Surgery.¹

BY JOSEPH PRICE, M.D.,
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I PRESENT brief histories of a small group of cases in which I found many points unique in interest, both in the history and pathology. All of them were delayed operations, patients had suffered too long, lost too much flesh, opiates had been used freely for the relief of pain, many had suffered recurring attacks of peritonitis favoring extensive and well organized adhesions. Suppurating planes had invaded important viscera, necessitating painstaking surgery for their repair.

I present the group chiefly to demonstrate what can be accomplished in neglected and desperately ill patients.

Too many of these cases are refused operative interference; are told that it is too late, that the operation will kill them.

Many are tinkered with by a great variety of harmful and useless methods. The first case in the group, a supra-vaginal hysterectomy in a patient, Miss G., 35; a multinodular fibroid. Three years ago I urged the removal of the appendages. At that time the tumors were small, the patient's general health excellent. Pelvic adhesions followed local treatment, also alarming emaciation and pain. The removal of the tumor required an extensive dissection and

enucleation. She made a perfect recovery and has returned to her home.

No. 2. I report in brief to discuss delayed ovariectomies. Mrs. H, aged 75, five children. Four years ago she noticed a tumor in her side. The tumor grew to an enormous size. She was thin and bloodless. In the section I found universal adhesions, necessitating drainage. She recovered speedily.

She had been repeatedly counseled to have nothing done—she was “too old;” she would not bear the operation. Large numbers of these neglected cystoma are to be found throughout the country. Tapping and delay have been counseled and commonly the operations are done late and at the most unfavorable time possible. It is unfortunate for women suffering from cystoma that every practitioner does not possess Bantock's little book, “A Plea for Early Ovariectomy.” This old lady is one of a series of five ovariectomies in the last six months in patients over 70 years of age, all recovering.

Ovariectomy in old ladies is generally successful. They are difficult to nurse, childish and impatient, want to go home to their feather-bed, etc.

No. 3. An ovariectomy in a spinster aged 42. She had carried the tumor over one year and was treated by a skilful practitioner for marked renal disturbance. Some effusion

¹ Read before the Obstetrical Society of Philadelphia, November 2, 1893

about tumor; limbs œdematous; renal secretion scant.

Section; left ovariectomy; irrigation and drainage; large multilocular cystoma of left side; universal adhesions; recovery; convalescence rapid.

No. 4. Age 23; blonde; an actress no children; no miscarriages. A sufferer for over two years with serious tubal and ovarian disease. Removal of both sides, irrigation and drainage; recovery. Specimens: Double pyosalpinx, double ovarian abscess and general adhesions to bowel and omentum.

No. 5. Mrs. C., age 21; one child; no miscarriages. Removal of both appendages, irrigation and drainage; recovery. Specimens: Double pyosalpinx and ovarian abscesses. Universal adhesions. The last two cases were companions and actresses, both anæmic and greatly emaciated, wasted to skeletons. It was interesting to watch their convalescence. Both had been great sufferers. After the sections they were bright and cheerful, slept well, ate well, skins cool, tongues clean and not a hitch in their convalescence.

No. 6. Miss A., age 20; ill for more than a year and under treatment. Section; removal of both appendages, irrigation and drainage. recovery. Specimens: Huge pus tubes on both sides with abscess of one ovary, universal adhesions.

She was greatly emaciated; rapid, feeble pulse and persistent vomiting.

No. 7. Mrs. E., age 39. Six children, four abortions. Multi-nodular fibroid with tubal and ovarian disease on both sides. Section; removal of both sides. Specimens: Double hydrosalpinx, universal adhesions, irrigation and drainage; recovery.

Hagar's operation to arrest the growth of fibroids I value as much as any operation I do. We do it for two specific purposes: (1) to arrest the growth of multi-nodular fibroids, and when done thoroughly and completely the results are very satisfactory; (2) for the removal of diseased appendages commonly complicating the growth of fibroids. It is very common to find occluded tubes, with retention. These operations are far from simple or easy, but when well done the results are pleasing. Post-operative sequelæ, bowel and omental adhesions should not follow them.

No. 8. Mrs. E. F., 31; no children, no miscarriages. Has been in the hands of an active practitioner, a man of large experience and good judgment. More than two years ago Dr. B. urged the removal of a diseased ovary and tube on the left side. She refused operative interference, continued to suffer, loose flesh and strength. The emaciation was very marked. She missed one period early in the summer, followed by paroxysms of severe pain. Dr. B. suspected ruptured tubal pregnancy and asked for council. We urged section. August 14 I removed both sides; found a small dermoid of left ovary and a tubal pregnancy of right side; universal adhesions; irrigation and drainage; convalescence without a hitch.

She was painfully apprehensive of the result. I lost a section in her street some years ago, the knowledge of which distressed her very much.

No. 9. Miss E. C., aged 17; single; right ovariectomy; irrigation and drainage; recovery. Specimen: Strangulated, large cysto-sarcoma of right side, four twists; omentum greenish; black tumor irreducible; long incision; adhesions general, and a sickening odor

about the tumor, with lymph and muddy fluid at points; general angry peritonitis.

This young woman should have died. She was put on the table in collapse; pulse too rapid and feeble to count at the wrist; all the distressing symptoms of approaching dissolution present; strychnia, digitalis and spirits were used freely with dry heat. She was the patient of Dr. Stewart, 19th and Green Streets, who recognized the rotation and urged its immediate removal.

In this last six months' work I have have had six twisted pedicles; all recovered after prompt ovariectomy.

In 1865 Rokitsky published a paper on "The Strangulation of Ovarian Tumors by Rotation." In my experience such rotations have not been rare.

Rokitsky has given the particulars of thirteen cases, eight of which he found in making autopsies after fifty-eight deaths from ovarian disease.

Sir Spencer Wells has recognized it in over twenty of his cases. In two cases it caused death before operation.

Rotation is most commonly due to long pedicle.

Rotation commonly follows labor if cystoma complicate gestation. I have dealt with three such cases, and some have occurred in my brother's work. The increased liberty to the tumor favors rotation.

No. 10. Mrs. V., aged 23; no children; no miscarriages. Section; removal of both sides, irrigation and drainage; recovery. Specimen: Double pyosalpinx; firm and extensive omental and general adhesions; omentum firmly adherent to tubes and ovaries on both sides; portions of omentum remained attached to specimens after

removal, demonstrating its general attachment; free portions tied off with fine silk.

No. 11. Mrs. K., aged 48 years; eight children; no abortions. Section; right ovariectomy, irrigation and drainage; recovery. Specimen: Cystoma, twisted pedicle right side, parovarian cyst. After its removal it was easy to make two cysts out of the one, demonstrating its true character. The cyst increased rapidly in size after the strangulation occurred.

No. 12. Mrs. M. B., aged 29; no children; no miscarriages; great sufferer for seven years. This case beautifully demonstrates post-operative sequelæ, now so common. The most trying part of my work at present are the operations for post-operative sequelæ—the incomplete and abandoned operations. It is simply surprising, the great number of abandoned operations throughout the country. Some prominent operators holding important positions will open the abdomen from enciform to pubes, take a look at a few complications, shake their heads and order the abdomen closed. The abandoned and the experimental cases all demand relief at somebody's hand.

In Mrs. B.'s case I found universal intestinal adhesions following previous section. The whole of the small intestine was adherent throughout, requiring prolonged careful separation. Numerous small breaches in bowel occurred in the separating, necessitating the use of some forty sutures. Numerous points of obstruction; one diverticulum; five prominent operators present; recovery.

The incision of abscesses or cysts with evacuation of contents followed by stitching of sac or drainage are all

timid and unsurgical procedures. I have two such cases in bed now; they came to me for completed operations.

No. 13. Miss K. C., aged 38; single. Section; right ovariectomy, irrigation and drainage; recovery. Specimen: Large multi-locular cystoma right side; universal adhesions adherent to liver and both kidneys; œdematous limbs; scant urine.

No. 14. Mrs. McL., aged 31; one child; three miscarriages. Section; removal of both appendages, irrigation and drainage; recovery. Specimen: Double pyosalpinx; universal adhesions; tubes were large and charged with pus.

No. 15. Mrs. C., aged 32; no children; no miscarriages. Section; removal of right side, irrigation and drainage; recovery. Specimen: Right ovarian cyst, dermoid, suppurating; huge pus tube on right side; universal adhesions; cyst adherent to bladder, uterus and iliac fossa; dermoid and pus tube completely filling pelvic cavity and firmly adherent to surrounding parts. This operation was witnessed by two or three of the most prominent operators in America. The adhesions extended from sigmoid to cæcum, with strong adhesions of appendix.

No. 16. Miss Y., aged 22. Section; removal of both appendages, irrigation and drainage; recovery. Specimen: Double hydrosalpinx; universal adhesions; appendages firmly fixed in hollow sacrum; specific history, under treatment for over a year. Operation postponed on account of prospect of marriage and the morphia habit, three grains daily hypodermically.

No. 17. Mrs. F., 35. Section; removal of both appendages, irrigation and drainage; recovery.

Specimen: Double pyosalpinx, double ovarian abscess, universal adhesions firm and well organized.

Mental condition followed closure of cervix and perineum.

No. 18. Mrs. C., aged 37. No children, no miscarriages. Supravaginal, extra-peritoneal hysterectomy. Specimen: Fibro-myoma of uterus, hæmatosalpinx and cyst size of orange of right ovary; universal adhesions of bowel, omental and pelvic. Holes in omentum closed and ragged portions tied away; irrigation and drainage. Recovery.

It would be easy to prove from the records and my correspondence with experienced surgeons, that drainage is really one of the chief of life-saving methods in surgery. Some of the objectors to the glass drainage tube offer arguments against its use which their own experience refutes. Sir Spencer Wells, for instance, cites a case in illustration of its value, and goes to the trouble and expense of giving a cut of it on page 110 of his last book. And he further acknowledges that two of his successors at the Samaritan Hospital resorted to flushing and drainage oftener than he did, and that it was found that the percentage of deaths from ovariectomy in his hands had been over fourteen, while in the hands of his successors it had been less than five. Yet Sir Spencer Wells condemns drainage.

Thomas Keith valued it, and all prominently successful operators since have valued it. It is strange that operators do not accept the successful results properly and justly due to drainage. The surgeon accustomed to watching the after treatment of his patients cannot

fail to note the difference between the drainage and non-drainage cases, the drainage cases giving little trouble or anxiety and recovering with rarely a hitch in convalescence; and this is confirmed by experienced nurses. Some of the critics of drainage are scarcely entitled to speak with any weight of authority. Some of them go so far as to maintain that drainage is an admission of imperfect surgery. At the same time they tell us that they *lost four cases from sepsis, due to carefully prepared catgut ligatures*. When a man condemns drainage I feel that he has been operating in a number of cases in which he should not; for instance, removing comparatively healthy appendages in cases of globus hystericus, or sensitive back, etc. But take the class of cases which I see so commonly—those in which there are various forms and severe grades of suppurative disease—my conviction is that in these cases there are no other means of saving life except those of removal, cleanliness, washing and drainage. While we speak so freely about drainage, we do not mean to say that it is our practice to drain in all cases.

In healthy tumors, in cases in which adhesions have not to be broken up, in which no pus escapes and the operation is an ideal one, drainage is not necessary. In a healthy peritoneal cavity an ideal operation will prove successful without drainage. I have demonstrated this in six consecutive Porro's, where the healthy uterus was removed from a healthy peritoneal cavity. We drain in all cases in which there is leakage of pus or muddy lymph, in cases of ruptured ovarian cysts with localized

or general peritonitis, of suppurative dermoids and where there is fluid in the peritoneal cavity antedating the operation.

Recalling the history of ovariectomy and contrasting the work of McDowell, Atlee, Nathan Smith and others, who tied their pedicles with shoemakers' thread and a string made from a kid glove, we are satisfied that we can take shoestrings from gutters and after thoroughly cleansing them do the most complicated ovariectomies, followed by drainage, and they will recover. Had the operations in the four cases followed by sepsis been clean and followed by drainage. If necessary, their lives would have been saved. I would gladly do without drainage, but my work becomes the more complicated as time goes on. Daily I have to deal with neglected cases, refused or abandoned operations, and in these serious operations, followed by drainage, carefully placed and cared for, I have results pleasing throughout the convalescence.

One of the most serious of complications—far-reaching in its mischief—is the reckless and indiscriminate use of opium. We have at present in America an army of women—one greater by far than the regular army of the country—who are dying of opium poisoning, and for this alarming condition of things medical teachers and physicians are responsible. The question as to when, where and by whom should the work be done is quickly and easily answered: First, it should always be done early; second, where all the environs are cleanly and favor the most scrupulous cleanliness and in every way conditions as healthful as can be obtained. And the operation should always be done

by a specially trained operator, one who has experience in general surgery. Many of the younger school of gynæcologists have unfortunately begun the study of surgery in the peritoneal cavity. The value of the private hospital lies in the fact that the surgeon can give his work the closest of personal attention. The results of abdominal surgery in clean, private houses sufficiently near for the surgeon to watch his patient are the best of all for many simple reasons—for one, a home feeling is helpful to the patient. Results are and

will continue to be better in the private house and private hospital than in the general hospital, for the strong reason that they give to the surgeon a better control of conditions. All surgery should be done in the early morning, except in cases of accident. The record of results of operations done in the morning as contrasted with those done in the afternoon make the most favorable showing. Not the least important consideration in our work is refined and special nursing.

Pelvic Congestion.¹

BY ALMON CLARKE, M.D.,
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PELVIC congestion is a condition, not a disease. Like all diseases, except those of specific or germ origin, it may depend upon a variety of causes. It is of exceedingly common occurrence, few women, or none, escaping it altogether, and many suffer from it so continuously that they scarcely know a well day. It is the cause of leucorrhœa, frequently of dysmenorrhœa and amenorrhœa, an invariable accompaniment of displacements and all the inflammatory derangements of the pelvic organs.

Want of time compels its present consideration only as seen in the parturient woman. If for several weeks or months before confinement the patient complains of weight or pain in the lower abdomen and back,

of swelling of the lower limbs or their veins, of piles, of gastric, and cardiac disturbance, of nervousness and restless nights, other causes not being apparent, it is safe to conclude that all the pelvic vessels are unduly engorged.

A multitude of reflexes, as distant neuralgias for instance, may go with it, which act and react upon one another, and upon the principal cause. One of these is nausea. In this condition, unless its true cause is discovered and removed, many patients suffer from the beginning to the end of pregnancy, and from its results afterwards.

After prolonged suffering confinement at last comes. The os is rigid; the pains are severe, but progress slow, and a general feeling of nervous unrest and anxiety disturbs the scene.

¹ Read before the Wisconsin State Medical Society, 1893.

The first stage finally passed, for some mysterious reason the second stage does not progress in a normal manner. The position may be abnormal—in fact, is very apt to be. Owing to reflex action the contractions are irregular. Instead of pressing downwards from the fundus, the pains contract the lower part of the uterus more than the upper.

After some waiting ergot is given, with the result only of complicating the difficulties. Finally the forceps or version is resorted to, and the child delivered.

Similar difficulties attend the delivery of the placenta. Hour-glass contractions, or irregular contractions, if not strictly hour-glass in form, often make the delivery of the secundines very difficult. When at last accomplished it is often followed, directly, or in a few minutes, by a great gush of blood. Then again ergot is resorted to. It may be thought necessary in order to save life. But is it rational? Is it not tying up the engorged vessels without removing the engorgement? Severe after-pains must follow its use, and prolonged congestion and sub-involution. The tampon, with morphine, is better.

Thus, to the end of a difficult and painful labor, we have followed a case of chronic pelvic congestion. What follows? What could be expected rationally to follow? The uterine sinuses and veins are enlarged and full of blood. Their mouths are open, and if an enemy, in the shape of an army of bacteria, is allowed entrance to the vagina, child-bed fever is a certain result.

But, if at the close of labor the uterus and vagina are cleared of all coagula, the patient washed, bandaged

and a dressing of one thickness of gauze and a thick mat of absorbent cotton applied and changed as often as wet, so that no bacteria can enter, this danger will be averted. Yet other difficulties will retard recovery, attended with much suffering, if not actual danger. What are they? We have all met them—are meeting them every day. One of them is pain; so-called *after-pains*. We are apt to attribute these to fatigue, neuralgia, or some vague nervous ill. Is it not more probable that the pain is caused by blood pressure—engorgement of the uterine vessels? This condition remains, and we have sub-involution. Add an inflammatory element and we have cellulitis, pelvic peritonitis and an extensive exudation, filling the pelvis with a hard, sensitive mass that may break down into pus, or, after many weeks be removed by the slow process of absorption. Now, what was the pre-determining cause of all this? And why does not the patient, under vigorous treatment, get well? She has been douché, poulticed and painted with iodine, perhaps blistered, and has taken alteratives, ergot and tonics, but her suffering continues for weeks.

This brings us to the consideration of the etiology of pelvic congestion. No doubt there are cases in which it is caused by reflex vaso-motor influence proceeding from morbid conditions of the uterus, created by former injury or disease. The sympathetic ganglia—the “abdominal brain” of our colleague, Dr. F. B. Robinson—have much to do in creating this congestion in cases where a local reflecting cause exists. But that these are the usual causes my experience and study have led me to doubt.

On the contrary, in a far greater number of instances the cause seems to me to be mechanical and direct. This may be cardiac or hepatic obstruction, or even the pressure of corsets or waist-bands. Pregnant women sometimes wish to conceal their condition, for the sake of going into society, as long as possible, and to accomplish it wear their clothing dangerously tight, thereby inflicting upon themselves prolonged suffering. In the majority of cases, however, the cause of pelvic congestion is accumulation of fæces in the large intestine. It not infrequently occurs, however, that the patient, and sometimes her attending physician, deny that she is or has been constipated. She declares that her bowels are regular, and proves it by saying that she has a passage every day. Sometimes she says she has had diarrhoea for two or three weeks, and for that reason insists that she cannot be constipated. A careful practitioner will not be misled by such statements, for nothing is more common than a daily evacuation, but a small, insufficient one, leaving each day one-quarter to one-half of what should be removed to accumulate in the colon above the sigmoid flexure. Hard masses thus accumulated and lodged in the pouches along the sides of the colon often remain for many weeks, and sometimes by the irritation they create a diarrhoea is caused. Diarrhoea thus established may afford some measure of relief and yet fail to dissolve and remove the hard fæcal masses, and there they remain, keeping up constant passive congestion of all the parts below, until after labor has removed pressure upon the bowel.

The laity generally and sometimes

physicians, appear to think that emptying the rectum empties the bowel. So deceived are they by the mere fact of regularity or daily action that it is often impossible to convince them that the colon is loaded.

Perhaps the patient insists that she has given full attention to this matter and secured excellent daily stools; yet an attack of severe and nearly fatal peritonitis immediately following labor, reveals the fact that two chambers full of dried fæces were packed away in the colon. She had good passages, no doubt, but not sufficient ones, for, having an uncontrollable appetite, she ate all she could hold, and thus literally became stuffed.

It is not the purpose of this paper to discuss constipation, but some of its important results. My contention is that it is often so concealed as to be wholly unsuspected, even by astute practitioners, and wherever pelvic congestion exists fæcal accumulation in the colon should be looked for. If not found the case should be treated as if it were a known fact, and the treatment will often prove its existence.

Treatment.—The above statements, if true, point to only one rational plan of treatment, which is to remove the cause radically and the results as soon as possible—that is, to clear the whole length of the colon and keep it clear, and afterwards to promote absorption and strengthen the weakened blood vessels by massage, electricity and such other local and general treatment as may be indicated.

Opinions differ as to the method and means of treating constipation. During the last decade the so-called

orificial method, or treatment of the rectum, has been much in vogue. But as a rule the rectum is all right if there is no obstruction to the return circulation. Of course, I do not mean by this remark that rectal surgery is not necessary in any case, nor that it is not a help to cure diseases that exist higher up. For the removal of large faecal accumulations, injections of raw linseed or cottonseed oil, from a gill to a quart, and retained several hours if possible, are of great service. The oil lubricates and softens the surface of the dried lumps better than anything else I know of. If the oil itself does not cause a proper evacuation, the colon should then be flushed with all the warm soap water it can be made to hold. Laxatives should be used at the same time, of which there are many good ones, although the writer's preference is a liquid prepared of salts, senna and rhubarb, with an aloin parvule added when necessary.

This practice should be followed daily or oftener until the practitioner is sure the whole length of the colon is entirely clear of old accumulations. As a rule strong cathartics do not accomplish this result, as they but too often set up a liquid diarrhoea that sweeps through the bowel carrying away only the softer material and deceiving both patient and physician with the idea that all has been done that is necessary. This is the thing most to be looked out for.

As long as there are any old, dry faecal masses stowed away in the pouches anywhere along the length

of the colon, notwithstanding the bulk may have been removed, the pelvic congestion will continue. I prefer a moderate laxative every night at bed-time. In the morning, after breakfast, massage should be employed.

A good method is to press with the fingers of both hands upon the sigmoid flexure and make interrupted pressure clear around the colon to the caecum and back again several times, and, in cases where it is possible, all parts of the colon should be grasped and gently pressed by the hands. The plain object of this is not only to excite peristalsis, but to dislodge the masses from the pockets wherein they have so long been retained.

The foregoing, although written with reference to parturient cases, is equally applicable to the non-parturient. No case of metritis was ever successfully treated without the colon being first relieved of its burden, and this is true of all pelvic diseases.

In this brief essay it has been impossible to more than glance at some of the symptoms of pelvic congestion, and many have been passed over, both direct and reflex, which, perhaps, would have made a more graphic description.

I presume I have said nothing new to any one, but if I have succeeded in impressing the necessity of great thoroughness of examination and treatment, especially in those numerous cases in which the true cause is overlooked, the object of my paper will have been attained.

Death of Doctor Emil Blanc: Very Acute Septicæmia, of Puerperal Origin, through Infec- tion of the Finger.

BY DR. M. A. PONCET, M.D.,

Professor of the Surgical Clinic of the Faculty of Medicine at Lyons.

I WRITE these lines under the shock of painful emotions.¹ One of the most beloved and most distinguished of our young surgeons has just succumbed, in spite of all our efforts, a victim of professional duty. Dr. Emil Blanc died Sunday morning, carried away at the age of 35 years by super-acute septicæmia, of puerperal origin. The face of our regretted colleague was well known; he was met daily in the hospital, at the school, wherever there was work to be done. Formerly the head of the clinic of accouchements, he devoted himself more especially to gynæcology; his important works on clinical and anatomical obstetrics had gained for him a deserved distinction. Every one knew his erudition and the wide extent of his general knowledge, which he increased each day by persistent labor; he was a candidate for the coming competitive examinations for the professorate, and his competitors, his numerous friends, knew that he was a man not to be easily overcome, one who would pursue to the end the object which he wished to attain. To recount such a death is to render a lasting honor to the memory of this indefatigable worker, who was well adapted for great struggles and for success; it is an honor to the whole medical and surgical profession.

On Tuesday, May 23, about eight o'clock in the morning, he removed the débris of the placenta from one of his patients, who was suffering from puerperal inflammation. At this time he had no apparent wound, no visible excoriation, unless it were an apparently insignificant denudation, occupying a very limited surface, near the lateral fold at the root of the nail of the left index finger; he did not even notice this little epidermal crack, this "hangnail," until he felt himself severely ill, then at that spot he felt a slight pain, which was increased by pressure. When I saw him for the first time, forty-eight hours after the beginning of his attack, the pain there had disappeared, and locally no sign of an inflammatory lesion could be found. On the very day of the suspicious contact, and about six hours after it, at two o'clock in the afternoon, he experienced suddenly a very violent pain in the left axilla; this intense pain, which was the initial symptom, soon increased, and by its severity already awakened the greatest anxiety. The hand, the forearm, the arm were not affected; not the least cutaneous redness, not the least track along the lymphatics revealed a local infection, which at once had struck the axillary cavity.

At four o'clock, two hours after the appearance of pain in the axilla, the general symptoms appeared with sud-

¹ Nouv. Archiv. d'Obstet et de Gynecologie, October, 1893.

den violence. First there was a chill, not a very severe one, but there were sensations of cold and continuous shiverings during one or two hours, then nausea and vomiting, which persisted at longer or shorter intervals during the first two days.

Dr. Blanc experienced at the same time an indefinable malaise, a sensation of prostration, of mortal weakness, which left him no doubts as to the certainty of the gravity of his condition. He immediately concluded that he was struck by death. Then under the shock of profound general depression, overwhelmed by suffering, he took to his bed never to rise again. The night which followed was a bad one, with great agitation. The temperature in the evening was 40° C. (104° F.), the next morning 39.7° . He complained of headache, of wandering chills, but especially of the same atrocious pain in the left axilla and in the corresponding thoracic wall; the least movement of the arm, the lightest pressure, increased his suffering.

Doubt was no longer possible, it was certainly a case of acute septicæmia, by so much the more formidable since there was present a general infection from the beginning without landmarks left in its route in the shape of felon, or of lymphangitis. This was the opinion of my distinguished colleague, Dr. Rochet, who from the first had considered the case of our unhappy friend as extremely grave.

When I saw Dr. Blanc on Thursday at 1 P.M. the temperature had been in the morning 41° , at noon it had decreased to 40.3 . The skin was dry and burning, the pulse between 120 and 130. The left arm was held close to the trunk and could not

be moved without exciting horrible pains, which moreover came on spontaneously under the form of lancinating, deep stabbing pains.

The local examination, which was therefore very difficult, gave no very precise indications; nevertheless, it was possible to remark a slight swelling without change of the color of the skin in the rear of the anterior border of the pectoralis major and of the anterior and inner part of the shoulder. This tumefaction extended as far as the supra clavicular hollow; it was even more distinct above the clavicle than in the neighboring regions. At this time the appearance of the face was still good, the respiration normal. There was no sign of dyspnœa, or of suffering for want of breath, and we sought for a ray of hope in the presence of the former condition, and in the absence of the latter symptoms.

It seemed to me that all hope was not absolutely lost, especially if we intervened energetically *ferio et igne*, and if we destroyed the focus of infection in the region where it had primarily become established. Operative intervention was then decided upon, and was accepted the more readily by our courageous colleague since he hoped to find thereby relief from his horrible pains.

The operation was performed Thursday at 6 P.M., with the assistance of my colleagues Gangolphe and Jaboulay, and Drs. Adenot, Curtillet and Loyson. The hollow of the axilla was tumefied, the skin presented its normal color; it seemed, nevertheless, that in some points it was somewhat slate-colored. On pressure, a sensation of deep, soft œdema was perceived, a sort of false œdema, not pre-

serving the imprint of the finger. The swelling extended in front of the axilla and above it, where it became less and less appreciable.

A wide incision following the lower border of the great pectoral muscle, rapidly exposed the axillary cavity; it was supplemented by another incision beginning at the middle of the first one and following the axillary border of the clavicle. The cellular tissue was œdematous, of a yellowish color. I removed a gland of the size of a pill, and three or four other glands the size of a little pea. These were soft and friable. The largest, which was clearly œdematous, infiltrated with serum, showed on section redness in points, and in the centre a little ecchymotic focus. No indication of suppuration. A similar operation was performed in the subclavicular region. Both wounds and the neighboring tissues were widely and deeply cauterized with the hot iron. An antiseptic dressing, which left the wound open, completed the operation.

This led to an immediate relief. The pains, which had been intolerable up to this time, disappeared completely; the following night was more calm.

Friday morning the temperature was 39.5° ; the general condition seemed better. The patient took alcohol in abundance; no particularly alarming symptoms were observed; the spontaneous pains had disappeared; in the evening, however, the respiration became more frequent (26 to 28 per minute). The pulse, which up to this time had been 120 went above 130; it became soft, compressible. The thermometer showed 40° .

At 10 P.M. the general condition

was certainly worse. During the night agitation increased, dyspnœa was greater, there was an almost continuous sub-delirium.

About two o'clock in the morning the same pains reappeared, as intense as before the operation. They were felt in the neighborhood of the axilla and extended forward to the sternum. Posteriorly they extended beyond the lower angle of the scapula and ran up at the side of the clavicular region; as before, they came on spontaneously and every pressure made them worse.

At eight o'clock in the morning the thermometer indicated a temperature of 39.8° . When the dressings were renewed this morning, Saturday the 27th, the raw surfaces were dry, of a coppery yellow color. Some drops of black fluid blood escaped. Around the two foci of infection could be again observed a swelling, the limits of which were not appreciable by sight. This tumefaction, which was little marked, and which extended four or five finger breadths around the wound, was revealed to us especially by the pains which the lightest contact provoked.

From this moment all hope of recovery was lost; the septic phlegmon invaded the cellular tissue far and wide, without the formation of gas, without the appearance of gangrene. The poisoning of the general system made rapid progress.

In the afternoon, about two o'clock, his situation grew suddenly worse. To the frightful suffering there was added an intense dyspnœa, veritable attacks of suffocation, which were the culmination of the tortures of our poor friend. He cried loudly for air. He begged for tracheotomy. This la-

mentable situation ceased under the influence of a subcutaneous injection of 0.01 of morphine and after some inhalations of chloroform.

The hours which followed were relatively calm, but the respiration was yet 60 per minute; the pulse grew smaller, it was lost under the finger; at midnight I counted 180 pulsations; then followed profuse sweats, a quiet sub-delirium, etc. The end was near. Emil Blanc died Sunday morning, May 28, at seven o'clock.

In this septicæmia, which was of a nature almost fulminating, the incubation lasted about six hours; the first local manifestation showed itself in the axilla corresponding to the finger which was inoculated. It was revealed by a pain of unheard of violence, which nothing could explain *a priori*. Eight hours later grave general symptoms burst forth, which the operation was able to keep in check during twenty four hours. It was a respite of short duration. The infection soon resumed its invading march and the patient succumbed on the morning of the fifth day.

In this lamentable history one fact was very striking, namely, the severity of the pains and their glandular origin. These pains were not explicable by any intensity of the inflammatory symptoms which were apparent, nor by sphacelus, strangulation of tissues, etc. The swelling was hardly appreciable. The explanation must be sought in a local toxæmia acting on the peripheral nervous elements.

In the fulminating gangrene which is engendered by the septic vibrio I have often noticed these particularly severe pains, but it is the first time

that in a septicæmia of another nature, appearing clinically as a dry septicæmia, almost without local lesions, I have seen an infectious circumscribed œdema give rise to such acute and persistent suffering.

The clinical appearances taught us, also, how extreme was the virulence of the pathogenic germs which, from an infinitesimal dose had so rapidly penetrated into the lymphatic network, and soon after into the circulating current. Cultures of them have demonstrated the truth of this fact. One drop of the serosity coming from the large ganglion has inoculated a tube of bouillon so that in less than twenty-four hours the whole of the liquid became turbid.¹ The infectious agent was the streptococcus, which, when little virulent, grows in colonies under the form of flakes or little lumps, and which, on the contrary, when its pathogenic properties are at a maximum, causes turbidity of the whole of the liquid which has been inoculated.

And now that we have followed hour by hour the Calvary so painfully trodden by him who is no more, O

¹ Report submitted to me concerning these cultures by the chief of my laboratory. Dr. L. Bor: "The large ganglion which served for inoculations showed a very little hæmorrhagic focus, but no abscess."

"The day after inoculation the infected tubes of bouillon were turbid; they showed the general turbidity of the bouillon which is characteristic of cultures of very virulent streptococci."

"The 29th. in the morning, I inoculated a tube of gelatine; the culture was already visible on the 29th. On the 30th it was already possible to observe along the scratch on the surface of the gelatine, a series of little gray colonies, each touching the other and giving the whole collection a roughened appearance, absolutely identical with that of a culture made on the 24th of May with the pus of puerperal peritonitis, which was composed of streptococci."

"Blanc must have offered a field particularly favorable for the virulence of the streptococci. Overworked, diabetic for some time, he exemplified in the human subject certain experimental conditions pointed out by O. Bujwid, who increased the virulence of the streptococci by adding glucose to the culture."

my masters, friends, comrades, let us bend the last time before this tomb, so prematurely opened, where so many efforts and so many hopes have

tragically disappeared! The death of Emil Blanc leaves the profoundest regrets in the hearts of all those who have known him.

Removal of Fibro-myomata with the Pregnant Uterus, Eleven Weeks' Gestation, By Baer's Method; Specimens Exhibited; Recovery.¹

BY THAD. A. REAMY, M.D.

Mrs. R., aged 30; married, American, admitted to my private hospital, September 11, 1893. Family history good, patient's health fairly good until within past two months. She first menstruated at the age of 13. In September, 1892, she first noticed a swelling in the right side of the abdomen as large as the closed fist. It did not perceptibly increase in size for four months and then grew rapidly. Last May she noticed a growth in the left side, suffered constant abdominal pain, had profuse leucorrhœa, considerable vesical irritation.

When examined prior to admittance, the abdomen was enlarged to a seven months' gestation. A hard body freely movable, comparatively smooth upon its surface could easily be made out. It filled the upper portion of the pelvis and extended above the umbilicus. The uterine cervix could easily be reached per vaginam by the examining finger. It was suspiciously soft. The cervix moved freely from side to side as the tumor was carried by manipulation. No fetal heart sounds, and no so-called placental

souffle could be heard. The diagnosis was made of a uterine fibro-myomata. Its removal by abdominal section was decided upon as its growth was rapid and the patient's health rapidly failing. The operation was performed September 19, assisted by Dr. Bonni-field, Dr. Walters, of Covington, who had referred the case to me, being present. After the incision, the tumor with the uterus, was with some difficulty lifted out of the abdominal cavity. The uterus was directly in front of the tumor. Its appearance left no doubt as to its being pregnant. As the tubes and the ovaries were comparatively healthy and the tumor was sub-peritoneal, I decided to attempt its removal leaving the uterus undisturbed. This decision was made notwithstanding the fact that the tumor extended from cervix to fundus and its attachment to the uterus was very broad. Also the sub-peritoneal vessels, veins and arteries, distributed over the tumor from the uterus were large and numerous.

The capsule of the tumor was incised longitudinally, and its enucleation accomplished. Longitudinal section of the tumor was made from

¹ Read before Cincinnati Academy of Medicine, October 10, 1893.

behind and its removal accomplished without difficulty. So extensive was the uterine surface left uncovered by peritoneum, and so universal and free was the oozing of blood that I decided to remove the uterus as the only safe procedure. The uterine walls seemed unduly soft and abnormally discolored. An early abortion with its probable fatal results seemed almost inevitable if the uterus were left.

The ovarian arteries on either side were ligated, the broad ligaments between the uterus and ligatures clamped, incisions made on either side, the peritoneum incised an inch above the utero vesical fold anteriorly and peeled down. This had been done posteriorly in removal of the tumor. The uterine arteries on either

side were tied and the uterus cut away without rupturing the sac, as will be seen by the specimen. The cervix was now hollowed out by removal of the portion here exhibited, the infra-vaginal portion dropped, the anterior and posterior folds of peritoneum turned inward and secured in coaptation by several fine silk interrupted sutures. Several small vessels from which oozing occurred after hollowing out the cervix, were tied with fine silk before it was dropped. Pieces of fine gauze were used instead of sponges, and silkworm-gut ligatures used for abdominal wound. No drainage tube was inserted. I believe Baer's operation, as above, to be superior to all other known methods in properly selected cases.

EDITORIAL.

Poisoned Wounds.

THE sad death of Dr. Emil Blanc, one of the most promising of the younger gynæcologists of France, recalls the similar fate of the lamented Dr. Strong, of Boston, who fell a victim, shortly before Dr. Blanc, to the dangers inherent to his professional duties. In his case during an operation for appendicitis, some poison must have been absorbed by the finger or have lodged under the finger-nail; within twenty-four hours symptoms of acute septic infection developed. There was not even any localization in the glandular system, and thus there was no check to the

progress of the malady. Phlegmonous inflammation of the thigh, and acute nephritis shortly appeared, and in spite of every effort on the part of his attendants, death ensued on the fifth day. At the autopsy it was found that all the organs and fluids of the body were swarming with streptococci.

These untimely endings of brilliant careers, with others just as sad but less widely known, and with the many painful and serious inflammations which, occurring among physicians from infection of the hands, are not published because they have

not terminated fatally, call renewed attention to the dangers to which the surgeon and obstetrician are exposed in the performance of their duties, and render pertinent the inquiry whether the introduction of anti-sepsis has done all that it should and can do for the protection of operators who, in their anxiety to benefit their patients, too often neglect themselves quite unnecessarily.

To prevent infection two precautions are obvious: First, to take care that the hands are not in a condition to be infected; and, second, to provide that infectious material is removed or neutralized before coming in contact with the fingers. Under the first head, and of the utmost importance, is the care of the general health. It is a matter of common knowledge that the men who suffer from septic or poisoned wounds received in autopsies or operations, are, on the whole, the men who are not in robust health; men who are overworked and over-tired, men who are suffering from some constitutional malady, men who live in bad atmospheres, who get little sleep and less exercise, are apt to be the victims of such accidents. Many a man knows when he is overworking himself, and that his health is becoming impaired by the fact that every little cut and scratch festers until finally a felon or something worse comes as a sharp reminder that the laws of health are not to be trifled with.

Next, it must not be forgotten, that the hand is the most delicate, valuable and useful instrument which the surgeon possesses. He should take as much care of the hands as he would if he had to get new ones at a high expense whenever the old ones

were injured. Many a man who is careful of his instruments, and particular to see that they are kept bright and clean, will subject his fingers to all sorts of insults and injuries. The finger-nails especially, and the little fold of the skin at the root of the nail, require particular attention, and if they are subject to hang-nails and fissures they should be put under the charge of a competent manicure, at least until the owner acquires skill and knowledge enough to care for them properly himself. The modern zeal for rendering the hands perfectly aseptic has led to the introduction of methods which, although highly satisfactory theoretically, are often very injurious to the hands. Repeated and prolonged immersion in strong solutions of corrosive sublimate, permanganate of potash and oxalic acid are apt, in time, to render the skin harsh and brittle, and to lead to the formation of cracks and fissures and eczematous patches, and thus to make the hands totally unfit for fine surgical work; whereas if the skin is smooth and the nails well kept, the hands can be rendered clean enough by the conscientious use of soap and water and nail-brush, with a solution of creolin or some of the coal-tar preparations which do not injure the skin, reserving more active disinfectants to occasions which particularly require them, such as disinfection immediately after touching really septic matter.

In most surgical operations, and in nearly all gynæcological and obstetrical examinations and procedures, it is possible and desirable to remove all septic material from the field of operation before it comes in contact

with the hand, and this should always be done, not only for the sake of the patient, but for that of the surgeon. In curetting a septic uterus, or in removing a sloughing fibroid, or foul malignant growth, irrigation should precede and accompany the work in such a way as to preclude the danger of infection. In all operations the extremest care should be taken to avoid puncturing the skin of the fingers, and caution in this respect should be instilled into assistants with the utmost rigor; in case such an accident does happen, rubber finger-caps should always be at hand to protect the wounded spot until the operation is completed, and every means should be used to instantly

cleanse and disinfect any abrasion of the finger which is acquired in working on an unclean case.

Thus, by the observance of due care and simple precautions, a large proportion of the infected wounds which are so annoying and distressing may be avoided. It only remains to add that such a wound is legally an accident, and not a disease, and those surgeons who are prudent enough to carry an accident insurance policy should see to it that death or disability from an infected wound is clearly covered by the terms of the policy, so that if laid up by an accident of this kind they may be entitled to recover suitable damages.

SOCIETY PROCEEDINGS.

Suffolk District—Section for Obstetrics and Diseases of Women.

Meeting held February 22, 1893.

DR. JOSEPH PRICE of Philadelphia, read a paper entitled

CLEANLINESS IN MATERNITY WORK.

(ABSTRACT).

There has been much discussion from time immemorial as to dietary precautions, drink, climatic influences, dress, exercise, morals; much that is wise, much that is otherwise. Yet the subject of cleanliness has never been given that consideration in all its many bearings which its importance to the general health demands. Not only must the surgeon be as scrupulous in personal precaution as

possible, but the environments must also be carefully attended to, that the best results may follow.

Success in maternities and in private practice requires scrupulous attention to cleanliness.

This cleanliness should begin with the physician, his person, clothing, hands. It should extend to the nurse and with equal scrupulousness to the patient.

Professor Hodge says: "The result of the whole discussion will, I trust, . . . divest your mind of the dread that you can ever become . . . the *minister of evil*; that you can

ever convey, in any possible manner, a *horrible virus*, so destructive in its effects and so mysterious in its operations as that attributed to puerperal fever."

We cannot expect good results in a stinking atmosphere—by breathing air filled with the volatile refuse of the human body, the effluvia of sewers. Our cleanliness must also reach the stealthy, lurking poisons. It would be valuable could we get reliable statistics of the number of cases of septicæmia caused in young and healthy women by the impurity of the air of the room in which they are confined. *All* the surroundings must be cleanly.

Cleanliness should not be restricted to the external person, but should apply with even stronger force to personal morals. Improved morals and healthful physical conditions go together.

Science and experience confirm the fact that under filthy conditions we run great risks and have deaths, and that under opposite conditions we have good results.

Many diseases go on more actively in summer than during any other season of the year, because organic decomposition goes on more rapidly then.

The general public must be educated up to the understanding that there is no politics in disease and that our sanitary authorities should be representative of the highest intelligence.

There should be more maternity hospitals, and they should be better maintained. They are a great source of education in one of the most important departments of medicine, but they are something more. They are

humane institutions and the most christian of charities.

I would here acknowledge an individual professional debt, one shared in by the profession at large—to that grand old man, the "Professor and Autocrat of the Breakfast Table"—Dr. Oliver Wendell Holmes. We honor and love him for the delights we find in all the pages of his books, for his many witticisms, pointed with great common sense—for the elegant diction clothing the great thoughts veining every page he has written. We honor and love him the *more* for the *great truths* he has taught us, truths vital and guiding in the practice of our profession. When all that was ever done, uttered or written by a Hodge or a Meigs has passed out of human memory, ceases to be even honored by traditional mention, that described by Meigs as the "jejune and fizenless dreaming of the sophomore writer" will live on. The grand old "sophomore writer" lives to-day in a bright, cheerful old age, filled with the sense of a useful and nobly-spent life, that his fellow-beings are the better for his having lived, honored of two worlds, and looking with assured trust and confidence into the next. What a depth of truth, what a deep touch of pathos in the following words; words that should be deep graven in the memory of every obstetrician: "No man makes a quarrel with me over the counterpane that covers a mother with her new-born infant at her breast."

Dr. Emma L. Call, in charge of the Lying-in Department of the New England Hospital, reported the work there since its establishment in November, 1862.

Three thousand two hundred and

fifty-nine patients have been delivered.

To mark progress in care and treatment, consider results in each decade.

1862-1872. Hospital consisted of three small houses in a crowded part of the city. At this time this was the only maternity hospital in the city. Emergency cases were brought in by the police. Clinical thermometer was not known of and antiseptics the same.

During this period 1009 women were delivered. Mortality from septic diseases, 20, or about one case in 50. These fatal cases were mostly in two epidemics, 1867 and 1872. Of course, in addition to these fatal cases, there were a larger number of septic cases, which after varied periods of illness escaped with their lives.

In 1872 the hospital was removed to Roxbury and a new cottage built for the maternity cases.

Temperature records were kept and carbolic acid began to be used in the early part of this decade (1872 to 1882). During the latter part of time frequent douches of carbolic, permanganate of potash, phenol, etc., were a part of routine treatment.

Number of cases (1872 to 1882), 1026; number of deaths, 9, or one in 114. Still there were cases of sepsis every year, though no epidemic. This was doubtless due to the building of an annex cottage in 1879, to which all septic cases were removed and cared for by separate doctors and nurses.

In 1882 the cottage was thoroughly repaired and the plumbing overhauled, since which time records have been more satisfactory.

Number of patients (1882 to 1892), 1224; number of deaths from sepsis, two, or one in 612. These deaths were in 1884

Patients receive antiseptic douche at beginning and end of labor. After complicated labor an intra-uterine douche. Antiseptic pads worn. Irrigation of external genitals with antiseptic solution before and after each irrigation.

Rigid disinfection of hands of attendants practiced.

During past three years one case of septic peritonitis and two of extensive diphtheritic deposit.

In 1892 removed to the new "Sewall Maternity," fitted up with all the latest sanitary appliances.

Dr. J. Blake: The great benefit resulting from antisepsis has been conclusively demonstrated by the results in the lying-in hospitals. Favorable as these have been in the New England Hospital, those of the Boston Lying-in Hospital are even better. We all remember the paper of Dr. W. L. Richardson, in which he showed that in 1000 births there had been no death, and that in fact any rise of temperature of more than a degree or so was of very rare occurrence.

Unfortunately there are many who do not yet appreciate the necessity of asepsis. If I had my way I should make it a criminal offence if complete antiseptic precautions were not always taken.

Dr. Joseph Price: Boston has done more perhaps than any educational centre in the country for saving women.

The work of Dr. W. L. Richardson and Dr. John Homans and a few others cannot be estimated.

The history of maternity hospitals is exceedingly interesting. The mortality has varied from 1 to 40 per cent. A satisfactory solution of the shocking mortality in some hospitals can be reached when we look into matters

a little. In one, for instance, a large sponge was used for months and years sponging patients off after delivery. Some of the old nurses washed their hands superficially once a day. The towel was washed perhaps once a week. In the mixed hospitals the resident physician attended to a patient with erysipelas and went without washing the hands to attend a woman in labor. Maternity hospitals should be used wisely and humanely for educational work.

At the Retreat in Philadelphia patients are admitted two weeks before labor and remained four after. The plumbing is entirely out of the building—a very important matter.

Patients on admission receive a thorough bath, are given a laxative and have urine examined.

When labor pains begin patient receives a bath, a vaginal douche of corrosive solution, 1 to 2000, and goes into a clean delivery room. The toilet is made by a nurse who has nothing to do with the puerperal wards. Both nurse and physician bathe before entering the room and scrub again after entering. But one examination is made, if everything is favorable, until the head is on the perineum. After delivery the vaginal douche and occlusion pad of Dr. Richardson.

Out of 1200 cases there has been no death from any cause.

Dr. E. W. Cushing reported a case of

HYSTERECTOMY FOR LARGE, SOFT
MYOMA; SUTURE OF SEVERED
URETER; RECOVERY.

Miss E., of New Hampshire, 40 years old. Following history: Well until six years ago, when small tumor was noticed, which increased grad-

ually; never any menorrhagia; growth more rapid lately, health broken, heart rather feeble, digestion impaired, respiration impeded.

Patient is slight in figure, emaciated, abdomen occupied by a large tumor, indistinctly fluctuating; pelvis filled with lower portion of tumor, smooth and continuous with the uterus.

Abdomen opened; growth delivered; growth had lifted the layer of peritoneum from the posterior wall of abdomen and separated the folds of the broad ligaments. Outer part of broad ligaments with ovarian arteries tied off, but tumor could not be lifted from pelvis enough to get at the uterine arteries. To free the tumor its capsule was incised some four inches above brim of pelvis. On the left side a little spurt of clear fluid from what appeared to be a large vein was noticed. A rubber tube was used as constrictor, the tumor enucleated and cut away and stump treated extra-peritoneally.

On the left near the iliac vessels where the ureter should be situated was found the cut and ligated extremity of a large vessel. Convinced that this was the ureter, the ligature was removed, and after some search the corresponding end was found.

I now sewed the two ends together with two silk and one catgut sutures. The ureter was laid on pelvic floor, where it apparently belonged, and iodoform gauze packed about point of suture after the manner of Miculicz. A glass tube was carried to the bottom of the pouch of Douglas. The stump was fastened in the angle of the abdominal wound as usual and the tube and gauze brought out of an opening separated from the stump by two sutures.

Patient did well after operation, but on the fourth day the discharge from the gauze was ammoniacal. The amount passed from the bladder was normal. Rubber tube was substituted for the gauze. The stump cut away on the tenth day. The quantity of urine escaping from the tube never more than three ounces in twenty-four hours. Tube removed the fourteenth day. Patient at this time is sitting up. Has slight discharge from abdominal wound. One napkin by day and one by night keeps her dry. The amount is decreasing, and hope soon to have it stop entirely without further operation.¹

Dr. Joseph Price: I have been much interested in this subject of hysterectomy. Better operate before the tumor gets large. The early removal of appendages to arrest growth is one of the most valuable operations in surgery. These tumors seem to be on the increase. More of them grow

now after the menopause than formerly, apparently, from my experience.

I have had injuries to the ureters in two cases out of 101 supra-vaginal hysterectomies. I believe Keith severed one or both in one case. Tait opened the bladder in a hysterectomy which he did in Albany.

Dr. E. W. Cushing showed two tubes and ovaries removed on account of inflammatory trouble. The tube on the left side was largely dilated and there was an abscess situated apparently in the left ovary. This communicated with the vagina and with the rectum. Two small fibroids were also taken from the uterus of the same patient.

Dr. E. W. Cushing showed specimens of pus tubes.

Dr. Joseph Price: There is but one treatment in these cases—removal. As yet I have never found a pelvic abscess wholly independent of ovarian disease, except in traumatism or criminal abortion.

¹ The discharge of urine ceased entirely nine months after the operation. Patient is now in perfect health. One silk ligature came away from the fistula before it closed.

Obstetrical Society of Cincinnati.

SYMPHYSEOTOMY was lately the subject of some remarks by Dr. E. G. Zinke, who stated that he believed the prospects were that the operation would be abused. As to the technique of the operation, if one takes the trouble to read carefully Robert P. Harris' description as given at the meeting of the American Gynecological Society for 1892, he

will readily understand and regard it a comparatively easy and safe performance. So far as the knife is concerned, the reader thinks it will make very little difference whether one uses Calbiatti's or any other knife or saw, so long as one accomplishes the end in view. It has been suggested by some that it might be better to divide the symphysis to one or the other side

of the cartilage, as osseous union is apt to be more prompt and firm. This is yet to be determined. The results obtained by division of the cartilage have been quite satisfactory. The operation appears to be simple enough, but if not executed under strict aseptic and antiseptic precautions it will prove exceedingly disastrous to the mother. The mortality of infants born under symphyseotomy is much greater than those delivered under the conservative Cæsarean section. This is due, principally, to the delay in labor caused by insufficient or slow dilation of the os.

Symphyseotomy has not been confined to cases of contracted pelvis; it is recommended in cases of certain malposition of the head where impaction occurs which cannot be relieved without great risk to both lives. No matter what the cause of impaction may be, in an otherwise normal pelvis he believes that conditions may arise which would make symphyseotomy not only justifiable, but any other effort at delivery an error of judgment on the part of the obstetrician. Take, for instance, an impacted head (occipito post), the child still living, the soft parts of the pelvis dry and cedematous, the lower segment of the uterus extremely attenuated and the contraction ring visible, it would be a very dangerous thing to attempt the introduction of the hand with a view to carry the head above the brim in order to flex the head and change the position (occipito anterior), or to apply the forceps; and a still greater mistake it would be to perform craniotomy. The amount of room gained in consequence of the separation of the symphysis varies according to the age of the patient.

The older the patient and the fewer children she has had, the less the amount of separation; on the other hand in young women, at the end of term, the separation may be very considerable.

Experiments upon pelves, in cases where death did not follow parturition, amount to nothing. Experiments upon the pelves of women who have died either shortly before or after parturition alone can give a correct estimate as to how much room may be gained by this operation.

Of the first forty-one operations reported by Harris, the minimum amount of separation was about three centimetres, the maximum nine centimetres.

One of the speakers spoke of the difficulty of determining the diameters of the pelvis. He thought that difficulty will be overcome in proportion to the increase of better facilities for the teaching of obstetrics in our medical colleges and hospitals. When pelvimetry is more thoroughly and persistently taught, and students and practitioners are more impressed with the necessity of taking the pelvic measurements of every woman who is placed before them for the purpose of delivery and of whom there is reason, from an ordinary examination, to believe that the capacity of the pelvic cavity is less than normal, the mortality of the new-born will be reduced to a minimum.

In the case mentioned by Dr. Reed, which the speaker saw before Dr. Reed was called, all the diameters were curtailed, but principally the transverse. The measurements, internal and external, showed considerable diminution in the calibre of the pelvic cavity. He suggested sym-

physeotomy, being satisfied that a living child might have been delivered under this operation in this case. It was not a case for Cæsarean section. Nor was the case upon which, about three weeks ago, he performed successfully Cæsarean section, one for hysterectomy *per se*; but certain complications arose which necessitated Cæsarean section in this case. Had he resorted to symphyseotomy, the child's life surely would have been sacrificed.

The exact sphere or limitation of Cæsarean section and symphyseotomy are difficult to define. Every man must act upon his own judgment in the case before him. We can no longer say that Cæsarean section is justifiable only when contraction of the pelvis exists to a certain degree, and that all in excess of this belongs to symphysiotomy. Other conditions must be taken into consideration.

The best time to perform symphysiotomy, in his opinion, would be the end of the first stage of labor.

Dr. John M. Withrow reported a case of cephalhætoma. The child was delivered in a perfectly normal labor and nothing unusual noted in its appearance. The next day the doctor's attention was called to the fact that the child's head was mis-shapen, and on examination a fluctuant tumor was found on the posterior part of the right parietal bone. He palpated and endeavored to make the child cry out, but no impulse was given to the tumor. It did not extend to the other side and was not even in its contour, being a little more dense and permanent directly over the upper angle of the parietal bone near the median line. He saw the case about once a week for four weeks, when,

taking a brother physician in to see a fine case of cephalhætoma, he found the tumor entirely gone. The mother said that the tumor disappeared suddenly. Within forty-eight hours after she noticed the beginning of the decline the tumor was gone. His belief was that it would disappear gradually, occupying two or three months, while it disappeared in as many days. It existed altogether about thirty days after the delivery of the child.

Dr. E. S. McKee said he had experienced one case of cephalhætoma, but without the fortunate result in the case reported by Dr. Withrow. The birth occurred in London, England, and although a breech presentation the child was delivered without trouble or danger. The mother had given birth to thirteen children during her twenty-seven years of married life, six having died and two being still-born. The child seemed to be remarkably healthy when born, June 3, 1881, but commenced having convulsions, and soon had two per hour until its death the third day. Autopsy twenty-four hours after death: Between the scalp and pericranium a large effusion of blood coagulated, extending over a great part of the left parietal bone and not surrounded by any indurated ridge. In the cavity of the arachnoid corresponding in position to the outer tumor, a large and extensive clot of blood was found, causing a depression of brain in its deepest part, which was one inch to the left of the posterior fontanelle. The depression was one-half to three-quarters of an inch deep. The effusion extended to the foramen magnum. No ruptured vessels could be discovered. Other parts normal. The mother

stated that three of her other children died of convulsions. An interesting question is, did they have cephalhætoma and was there a hereditary tendency to this disease.

Varieties : Subaponeurotic, the simplest but not the most common, from a bloody effusion immediately under the cranial muscles; subpericranial, situated between the pericranium and the cranial bones, the most common form; diploic, situated within the diploii, a rare form and differing from others in that it continues to bleed when laid open; subcranial, generally situated between the skull and dura mater, and sometimes in the cavity of the arachnoid.

Treatment.—The evacuation of blood by the knife is usually unnecessary and may do harm. As a rule, non-interference is best. If pus forms it should be evacuated. Pressure and

the expectant plan of treatment is the best general rule. In treatment of the internal cephalhætoma, the external tumor being situated directly over the former and thus locating it, would it not be advisable to trephine the skull to evacuate the tumor? For the further consideration of cephalhætoma the speaker referred to his writings on the subject, viz. :

Cincinnati Lancet-Clinic, 1893, XI, 317-324.

Nashville Medical and Surgical Journal 1886, XXXVII, 53-59.

Medical Register, Philadelphia, 1888, III, 417-439.

Wood's Reference Handbook of the Medical Sciences.

New York Medical Record, 1885, XXVIII, 342-344.

Medical and Surgical Reporter, LIII, 1885, 715 717.

Gaillard's Medical Journal, XLII. 1886 198-200.

ABSTRACT FROM CURRENT LITERATURE.

BY S. P. COTTRELL, M.D.

Salol in Cystitis.

ARNOLD (*Therap. Monatsch.*, May, 1892) relates cases of acute and chronic catarrh of the bladder which have been much benefited by the use of salol in gramme doses in addition to the local treatment. Even tuberculous cystitis has been relieved by it. Arnold observes that salol makes the

uric acid, and renders it ultimately almost clear and free from smell; that the drug is well borne, even when administered for some length of time, and that it is a useful adjunct to the treatment, especially when only weak antiseptic solutions can be tolerated by the bladder. —*Brit. Med. Jour.*

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of November 2, 1893.

THE PRESIDENT, DR. BARTON COOKE HIRST, IN THE CHAIR.

IRRIGATION OF THE NON-PUERPERAL
UTERUS. BY DR. TALLEY. (See
page 121.)

DISCUSSION.

DR. J. M. BALDY:

I have been familiar with Dr. Talley's work in this direction, and look upon this method as possibly a valuable adjunct to the treatment of inflammatory uteri. The irrigation of the uterus, with the object of getting rid of acrid, acid discharges prior to making an application, or even without any idea of making an application, is certainly valuable. The same principle is carried out in other mucous cavities and is perfectly rational.

There are several points that nevertheless must be borne in mind, notably the necessity of establishing free drainage during the injection. The catheter shown provides for this source of danger. That point being borne in mind there is no danger. If in one case he has had absorption of carbolic acid and gastric symptoms from that source, it is a warning to be cautious in regard to the amount of drugs used in the water. One of the main points of the method is the cleansing of the mucous membrane, and another is the stimulating effect of the hot water itself. We all use hot water by vaginal injection for the same purpose as Dr. Talley uses it by intra-uterine injection; that is, to bring on the secondary effect of vaso-motor constriction.

I think that, possibly, intra-uterine treatment carried out by this method will, to a certain extent, do away with intra-uterine application of strong drugs. I have often had the impression that the good derived from intra-uterine applications was not so much due to the direct action of the drug as from the cleansing of the parts of the acrid, acid discharges which are causing trouble. As far as I have been able to note, that is

about the result that is obtained. The results that we obtained from intra-uterine applications we now obtain practically by the simple injection of fluid. I believe that Dr. Talley has come down to the simple injection without any application following. In some cases where nitrate of silver was used, there was colic; but the same women were subsequently treated with simple injections of alkaline water, slightly disinfectant, and there was no trouble. I can conceive that colic can be set up by the injection of fluid, especially if part is allowed to remain. We must bear in mind the necessity of free drainage, and be sure that no fluid is left behind. I believe that this treatment will prove a valuable and safe adjunct to our armamentarium, so far as local treatment is concerned.

DR. G. BETTON MASSEY:

This may be an excellent mode of treatment for the somewhat insensitive cases that come to the clinics, and are ready for anything and complain but little, but I doubt whether the method is not too harsh for application to the ordinary cases found in private practice. It demands for its easy and painless application a decidedly patulous orifice of the uterus. I should think that the method was inappropriate in many cases, on account of the necessary stretching that would have to be performed. This would be painful, and if performed as frequently as would be required would surely give rise to extreme discomfort. I doubt whether this method will be vigorously experimented with by many, as it does not attain to the gravity of an operation but is mere office treatment. Possibly good results might be attained in post puerperal cases, but it is to the other class of cases that I refer.

In considering the propriety of this method, one should be a little careful in the assumption that other mucous cavities of the body

are at the present time successfully treated by the application of the douche. Certainly, most of us should know that in the nasopharynx the douche has been abandoned on account of the dangerous results which might follow from inflammation of the middle ear, and any one who has had chronic rhinitis, as I have had, can testify to the irritating effect of water under these circumstances. Hence I can affirm that the cleansing qualities of these injections are not valuable ones. They are always irritating, and I want to protest against this method going out with the sanction of this society as a proper method of treatment of endometritis: it is behind the times and it is dangerous.

DR. WILLIAM EASTERLY ASHTON :

I have listened with a great deal of interest to Dr. Talley's paper, but I can not agree with him in regard to the benefit to be derived from local treatment with hot water in intra-uterine diseases. Those who have had a large experience with intra-uterine treatment have been much disappointed with the results. Dr. Baldy places this method on a par with such treatment as the application of iodine, carbolic acid, etc. These methods have failed. They have not given us the results that we looked for. The discharges continue. If we look upon endometritis as due to micro-organisms, you can readily understand how it is that none of these forms of local treatment will cure the disease. If the inflammation has become chronic the micro-organisms are situated in the deeper layers of the mucous membrane, and it is impossible by any method of local treatment to destroy them. I, therefore, oppose this method, for I believe that these cases of chronic endometritis should be treated with the idea that the deeper structures are involved.

The only way to get rid of the disease and remove the cause is by thorough dilatation and subsequent curettment. Hot water will reduce the size temporarily, but it does not get rid of the cause of the inflammation. Nothing short of the removal of the deeper structures of the lining membrane will accomplish this. The treatment with hot-water irrigation is not without danger unless carried out with aseptic precautions, which it is impossible to do in the office. There are a number of contra-indications which should be carefully considered, namely, various

forms of chronic pelvic disease. Under these circumstances, no matter how gentle the manipulation may be, there is a liability to excite an acute inflammation where before only a chronic one had existed.

DR. CHARLES P. NOBLE :

Dr. Ashton has said about what I had intended to say, and I shall, therefore, be brief. I am opposed to tinkering with the inside of the uterus in the office. It has not been very long since I came into practice, and at that time the making of applications to the interior of the uterus was the routine treatment. We all made applications with great disadvantage to our patients. I have seen a few cases in which peritonitis was set up by intra-uterine applications of iodine. At that time every case was dilated, swabbed out with cotton and a topical application of some kind made. Having gone on in that line for three or four years, I can add my testimony that this is a bad form of treatment. I agree with what has been said by Dr. Ashton. I think that the proper way to treat these cases is to anesthetize the patient, thoroughly disinfect the vagina and thoroughly curette the cavity of the uterus. This will cure the trouble. Many cases will get well also by treatment addressed to the general health, together with topical applications in the vagina.

DR. WILLIAM H. PARISH :

I altogether fail to see the force of the arguments presented by the gentlemen opposed to this method. If we consider the subject with reference to the character of the uterine mucous membrane and with reference to the results of treatment of other mucous membranes, we must conclude that the dissimilarity between the mucous membrane of the interior of the uterus and other mucous membranes is not so great as to render it not amenable to treatment successful in other localities, provided the technique is a proper one and the treatment is the one indicated, that is as regards strength and the character of the application. I long ago quit the application of strong solutions of iodine, of nitric acid and nitrate of silver, etc. In the past I have injected the uterus with syringes that were not well adapted to the purpose. Uterine colic may be produced in at least two ways. The one is by the injection of a

fluid that does not escape as rapidly as it flows in. A second is by the application of a remedy which is too active; for instance, Dr. Talley found colic resulted from a solution of nitrate of silver, thirty grains to the ounce.

Uterine colic is not the most important difficulty that we have to contend with as a result of injudicious treatment of the interior of the uterus; the liability to cause more active inflammation of the tubes must not be forgotten. The activity of any inflammation in the tubes may be increased by the use of remedies of too active a character. I am confident that in one case I contributed to the formation of a large amount of pus in the tubes by an application of nitric acid to the interior of the uterus, there being at that time inflammation of the interior of the tubes. Dr. Talley has presented the treatment of the interior of the uterus in a different light. There is no other method of douching the uterus which accomplishes the result so satisfactorily as his. The danger connected with the introduction of fluids into the Eustachian tube does not pertain here. In properly-selected cases and with proper appliances I do not see why we should not get good results, provided the remedy is not too irritating or too active.

Dr. Talley, in speaking with me, has said that he has found that his method is of greatest service where there is a relaxed condition of the uterus with a dilated condition of the cervical canal. He has not advocated the use of his method in tightly constricted cervixes. In the larger number of cases of endometritis the cervical canal is relaxed, and thus the treatment becomes applicable. I think that this promises a good deal more than the old method, which has been rightly condemned. I do not think that it is good treatment to carry with the ordinary applicator strong solutions, or with the ordinary syringe to deposit a few drops of tincture of iodine or other irritant in the interior of the uterus. I think that by the method of Dr. Talley the results will be satisfactory, and I hope that he will continue his experiments.

THE PRESIDENT :

I have used Dr. Talley's speculum in my office with great satisfaction in suitable cases. Every one who tries it will like it. I have modified the apparatus by using Skane's re-

flex catheter for the urethra. This is one of the best instruments, I think, for washing out the non-puerperal uterus with a not widely dilated cervical canal.

DR. J. M. BALDY :

There were several points raised in the discussion to which I should like to draw attention. Objection was made to this method on account of the dilatation of the cervix that would be required. Very distinctly, that is not the class of cases in which the treatment would be resorted to, so that this objection can be thrown out of consideration. Again, that class of cases in which its use was criticised by Dr. Ashton and possibly Dr. Noble, in which the curette should be used, is not the class of cases in which this treatment would be recommended. This is not a defense of the old methods of intra-uterine application to which we are all opposed, but it is a substitute for it in that class of cases in which we have to do this or allow the patient to go to her home without any treatment. In those cases where there is sufficient dilatation to permit the introduction of the instrument without pain, the patients immediately after the application express themselves as more comfortable than before. Some of the patients have gotten to feel that the discomforts which they feel will be relieved by the application. I am with Dr. Noble in the condemnation of the application of strong agents, but in spite of the statement that we get cures with the curette, I have had as many failures from the curette as from any other method. I do not believe that the curette is a sovereign remedy any more than the old methods are. It will cure certain cases, but in others it has no effect, even after its repeated use.

DR. F. W. TALLEY :

I wish to thank the gentlemen for the discussion of the paper. I can readily agree that there are cases of endometritis in which the curette will best effect a cure, but there are a certain number of cases one sees which are amenable to treatment by the application of iodine and other medicaments to the intra-uterine canal, and in which such treatment will be enhanced by the previous washing out of the uterus. It is not by any means intended to be applied to all cases of endometritis. We know that the old methods of

treatment have led to disappointment, and it is as a result of this that some advance has been attempted. I believe that we all recognize fully the value of heat in vaginal douches in the treatment of pelvic inflammation, and I consider the douching of the uterus one step in advance of the vaginal douching. It is only to be used, however, in those cases in which the cervical canal is patulous, allowing the cannula to pass without force into the uterine cavity. Of course, this is a new method of treatment, and only an experiment so far, but the results have been very flattering.

REPORT OF A GROUP OF INTERESTING
CASES OF ABDOMINAL SURGERY. BY
DR. JOSEPH PRICE. (See page 139.)

DISCUSSION.

DR. M. PRICE :

There are three cases in the hospital in which I have been much interested, and I think that they explain some few points in abdominal surgery. I am confident that many of our deaths in pelvic surgery—in fact, almost all, except those complicated with malignancy—can be explained by the fact that we have not done complete work. In these cases there were tumors in two, complicated by attempt at removal, where probably antiseptic fluids were used. Every square inch of the bowel was adherent, and the bowels were united by such well-formed adhesions as to require the scissors for their separation. In one case over forty sutures were required, and in the other I did not count them, but I was tying sutures for half an hour. One of these patients had taken twelve grains of morphia a day for a long time, and was maniacal when admitted to the hospital. That woman was almost entirely devoid of pain after the operation. Drainage was free for twenty-four to forty-eight hours, and the recovery was an ideal one. In both cases the recovery has been absolutely ideal. In one case it was impossible to tear away the adhesions, the scissors being needed. I am confident that all three of these patients would have died had the tumor been removed and the patient placed in bed without complete separation of the bowel. As shown in the report, there were in three different places complete obstruction by bands of adhesions.

I am confident that many cases are returned to bed without thorough examination of the bowel, and thus we often leave a condition which must necessarily prove fatal. Although the surgery, so far as the tumor is concerned, may be perfect, yet if we leave adherent and necessarily incarcerated viscera, we kill our patient.

Some six or eight years ago I operated, in the old Gyncean Hospital, on a young negro woman with supposed fibroid, as large as a coconut. When I opened the abdomen I found the bowels in about the same condition as in one of the cases referred to. She had been kicked in the abdomen by a colt. I tore the adhesions apart and hunted for the fibroid, but the fibroid was gone. The tumor consisted simply of a mass of intestine fastened together by the peritonitis following the injury. The patient made an uninterrupted recovery, and she still calls to see me occasionally to show that she is still well. She is as well to-day as I am. I am confident that complete surgery, and only complete surgery, with the separation of adherent loops of bowel and leaving the intestines in, as nearly as possible, their normal condition, will save most, if not all, of these cases.

DR. JOSEPH PRICE :

What my brother says about bowel adhesions is true, and I am satisfied that many early deaths (following operations) are due to the omission on the part of the operator to release pre-existing adherent and fixed ileum, and to free all kinks and adhesions. After the removal of the tumor the descent of the bowel becomes quite great, and angulation and strangulation becomes marked. The older surgeons had a great dread of touching or even looking at the bowels, but it is surprising the tolerance that the contents of the abdomen show to prolonged manipulation. They will not bear exposure to the atmosphere. I am satisfied that eventration is thrice more dangerous than prolonged separation of adherent small bowel lasting half an hour or longer. In some four recent cases I spent from half an hour to three-quarters of an hour with my index fingers and thumbs separating the generally adherent small bowel that I might see the mesentery. Before this the mesentery was not to be seen at any point. In the last case I used the scissors as

the strength of my thumb and finger was scarcely sufficient to tear the adhesions without the risk of wounding the bowel; and just here I may say that the scissors can be used with greater safety and freedom in some cases than the fingers, and consume less time in repairing the damage to the bowel. It takes time to repair small breeches and rents.

My confidence with drainage, I repeat, increases with increased experience. In the month of August, nothing gave me more pleasure than the exhibition of seventeen sections on one floor, sixteen of which had been drained. It gave me great pleasure to show them with cheerful faces, clean tongues, and reading newspapers. Some of these cases should have died on the table.

Again in regard to opium, what I say may seem uncharitable, but the man who has not learned to get along without opium in doing abdominal surgery has not learned to properly manage his cases or to do his work with the least risk and greatest comfort to both patient and operator.

REPORT OF TWO YEARS' WORK IN ABDOMINAL SURGERY AT THE KENSINGTON HOSPITAL FOR WOMEN, PHILADELPHIA. BY CHARLES P. NOBLE. (See page 124.)

DISCUSSION.

DR. G. BETTON MASSEY:

This is, of course, practically a paper on abdominal surgery, but a position that is taken by the reader certainly opens the subject to a word of discussion on the part of those who do operate. The statement is made that none of these operations were performed except after everything else had been thoroughly exhausted. This is something that we are all interested in. Personally, I am more interested in the other measures than in operation, and with this statement before me, it occurs to me to question Dr. Noble as to what was done previously to operation in the two cases of hematoma that were mentioned? How long a time was given to nature to dispose of these blood cysts? It is not customary in other portions of the body to open mere effusions of blood, and where the effusion is large, as it necessarily is in the pelvis, a greater length of time is

demanding for the action of the absorptive efforts of nature.

The author also reports six cases of uterine fibroid. I ask also what had been done in the way of treatment in these cases that had entirely exhausted the efforts of conservative medication and necessitated abdominal section? It does not answer these questions for any one to say that he is not an expert in one of the means of treatment of fibroid, namely, electricity. That may be the reason that we heard nothing about the use of electricity, but it challenges his position that everything else had been used in these cases. This question is particularly pertinent in Philadelphia, where nearly everyone thinks himself absolved from the general professional opinion that electricity should be used before attempting bloody operations in fibroids.

I want to say something on the allied question of early operation. That is something that we are all interested in, and it is a matter also brought up by the remarks of Dr. Price. In both cases the speakers urged early operation, and blamed on delay all sorts of dire consequences, and yet, according to their reports, there were no dire consequences. In the first paper we did not hear of any deaths. In the second paper we hear of five deaths in the ninety-nine cases, and certainly one of these five cases had not been subjected to the terrible results of delayed operation. I can very readily appreciate their desire to get cases early, but the position of the abdominal surgeon who urges early operation differs from that of the advocate of nearly every other procedure. He advocates something that has grave elements of danger, consequently his urging of early operation must be offset by the disadvantages that flow from the fact that many cases so condemned may be cured by other procedures. I should like more definite information as to the cases in which late operation caused death. If in the other cases, late operations were all successful, why urge that all cases should be subjected to the danger of operation that a few cases may be operated on successfully?

DR. GEORGE E. SHOEMAKER:

I think that Dr. Noble is to be congratulated both upon the low mortality and upon the small number of minor lesions that appear in his list of operations. At the same time I

think that one should not include in a list of abdominal sections cases of inguinal or femoral hernia. The risk in operations of that character is not as great as in abdominal section proper, nor are the problems involved the same.

In regard to the question of the time when pelvic cases should come into our hands, which has been touched upon both by Dr. Price and by Dr. Noble, it seems to me that the general practitioner does not always treat the matter quite rightly. He sometimes delays calling in counsel as though he felt that to call a surgeon implied operation. It does not necessarily do so. Surgeons are trying to do honest work, and use their best judgment to determine which cases should be operated on and which should not. They are ready to give the results of their experience without necessarily operating on every case. I know that the majority of our surgeons are refusing to operate in many of the cases with regard to which they are consulted. The practitioner sometimes seems not to regard himself responsible when a case dies in his hands without full examination. The certificate is signed in a general way, and it is taken as a matter of course. People must die. It seems to me that he has a duty in bringing to bear the best judgment that can be obtained. If he has no experience himself in that particular direction, should he not bring to bear the experience of others?

In regard to fibroids, the opinion of the best observers is changing in the direction of their removal, but there are certainly many that do not cause symptoms. These cases I for one advise to wait until symptoms do occur.

I wish to make a suggestion in regard to Dr. Noble's case of death in which he regarded heat-stroke as the cause. I suggest that a case may be septic and the average autopsy show no pus, no adhesions or thickening of the peritoneum. We have septiciemias with rapid death in high temperature where veins or lymphatic vessels are the chief seats of disease, as in pyelphlebitis, etc. We have sometimes obscure forms of uræmia with high temperature, which are not shown by the gross examination on autopsy. Without attempting to decide in this case I should hesitate some time before accepting heat-stroke as the cause of death after two days, even in a simple case. I have had a good

deal of experience in observing the work of surgeons in hot weather, and I have myself operated considerably in hot weather, and the cases have done as well or better than those operated on at other times. I recently heard one of the most experienced general surgeons of this city say that he thought that his cases did better in hot weather than in cold. It is not conceivable to me that a patient lying in bed in a cool hospital could die of simple heat elevation.

The question of operating on hæmatoma is of interest. It seems to me that when hæmetoma occurs in the tube the tube structure itself is so altered that we can not conceive of the restoration of the parts to a natural condition after absorption of the blood. I operated a few weeks ago where I could see nothing but a very hard mass of possibly old coagulated blood inside, but it was a black, greenish-looking tube, its outer extremity was without finbræ closed, smooth and rounded, and although I was obliged to call the case one of hæmato-salpinx, I could not conceive that the tube could have been restored to its natural function, especially as it was tightly bound down by the results of old peritonitis. The other tube and ovary seemed fairly good and they were not removed.

DR. CHARLES P. NOBLE:

With reference to the death reported as due to heat-stroke, I was as slow to accept the diagnosis as is Dr. Shoemaker, and it was only after the post-mortem was made and no cause of death could be found, and with the clinical history before me, that I was prepared to accept the diagnosis myself. As to the question whether a woman lying quietly in bed can have heat-stroke, I can testify from my own experience that this is possible. During the summer of 1892 I was called in consultation with Dr. Matthews in the case of a woman who had been lying in a room with a draught blowing over her. She had been in bed two weeks convalescing from some trouble, I do not remember what, but although there, with a draught over her, she had heat-stroke. When I saw her the temperature was 108°. We put her in a bath-tub with ice and she got well. It is, therefore, quite possible to have heat-stroke with the patient in a reasonably cool room. This patient had been in the Hospital for Epilep-

tics and was sent to me. I operated not with the idea of curing the epilepsy, but to relieve the pelvic pain from which she suffered. She was an epileptic, and, of course, had the feeble constitution which epileptics usually have with lessened nervous force. Instead of having the fortitude to endure pain, she simply fretted and worried from the moment that she woke up until she was dead. This possibly predisposed to the occurrence of heat-stroke. She died within forty-eight hours, and not three days as Dr. Shoemaker understood. I can not conceive of sepsis in a clean peritoneum taking place in forty-eight hours. How could she have had sepsis at any rate? It was a perfectly simple, clean operation. Of all the simple sections that I have seen this is the only one that has died. I do not believe that it was a case of septicæmia. If it had been septicæmia, it must have developed from the peritoneum and there must have been septic peritonitis. There was nothing whatever to indicate sepsis. I think, therefore, that we shall have to exclude that diagnosis. As to whether cases do well in hot weather, I never hesitate to operate, no matter how hot the weather. I have operated constantly all summer, and have had no trouble except in this one case.

With reference to whether these herniotomies should be classed as sections, that is an open question. In these cases we open the abdomen, and in two I had a large mass of omentum outside. So far as the risk is concerned, I think that it is the same as in all simple abdominal sections—that is, inappreciable. As the abdomen is opened in these cases, I think that they should be included. The only place where a question might arise would be in femoral hernia where you make the opening on the leg.

With reference to the point whether I would operate on a fibroid without any symptoms, I said that I was not prepared to accept the statement that every fibroid should be removed. Practically I am never called upon to decide whether or not I shall operate on a fibroid that causes no symptoms. If it produces no symptoms the woman does not come to see me. We are seldom called upon to decide that question. We sometimes meet with little fibroids no larger than the finger, and no one would undertake to do anything in such a case, unless they wanted to use electricity. No surgeon would inter-

fere with such a case. He would leave it alone.

Dr. Massey asks about the hæmatomas of the ovary. My experience with hæmatoma of the ovary is not great. I recently operated on one where there was a blood cyst in one ovary which I removed. There was a small one in the other ovary which I split, took out the sac and sewed it up. The woman was a Hebrew and would be willing to run some risk of future operation rather than be sterilized. In my judgment it is wiser to take out the ovaries. These patients are as great sufferers as I know of, and nothing relieves them. The books say that they never get well. The cases that I have seen did not improve under any mode of treatment, and it is a simple and safe matter to cure them by removal.

It has been asked why I did not use electricity for fibroids. I think that it has been demonstrated that electricity is far more dangerous than hysterectomy. In 100 cases the mortality from electrical treatment would be greater than if operation were done, and as electricity does not cure, while hysterectomy does, I prefer to take them out.

Dr. Massey questions whether delay had anything to do with fatal result in the deaths reported. Every one of these cases except the girl who had epilepsy is a typical illustration of the bad policy of delay. The first case had an intra-ligamentary tumor filling the entire pelvis. This became infected and contained two quarts of pus. I opened the abdomen, but the adhesions were so general and dense that I could make out no landmarks. The possibility of pregnancy suggested itself, and although my judgment should have told me that a woman in that condition could not be pregnant, I came to the conclusion that she might be pregnant and foolishly abandoned the operation. She died from leakage from the suppurating tumor. Had the case been operated on some years before it would have been possible to have made a correct diagnosis and to have saved the woman's life. Even as it was, had I gone on and taken the tumor out, the woman might have recovered, although even at the autopsy there was great difficulty in removing the sac.

In the next case the girl had been in bed nearly a year. She was so nearly dead that I told the family that she would die in a few

days if nothing was done, and the operation was undertaken as a ninety-ninth hour operation. In this connection I would say that I never refuse to operate on anybody. I tell the patient honestly what I think are the prospects, and if they want to take the chance I operate. My experience is, however, that the cases in which I give a practically fatal prognosis all die. This patient also had phthisis as the result of the delay.

The third case had been an invalid for five years, getting worse all the time, and had been in bed for weeks when I first saw her, and as in the previous case the operation was undertaken with the prognosis that she would surely die in a few days. She was so nearly dead that although it was an easy operation she had not sufficient strength to live long

enough for her nutrition to be improved by alimentation.

The fourth case was one of cancer, and in that case the result was due only partly to delay. The operation was a long and difficult one, and the woman never rallied.

Of the five deaths three were absolutely due to delay. Another bad consequence of delay is the formation of adhesions causing pain. This the electricians are prone to attribute to operation, but it is brought about by delay or in some cases by the electricity which is employed.

Adjourned.

HARRIS A. SLOCUM, M.D.

Secretary.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

ORIGINAL COMMUNICATIONS.

Mechanics of the Human Foot and Cases Illustrating Lost Mechanical Functions and their Restoration.

BY H. AUGUSTUS WILSON, M.D.,

Clinical Professor of Orthopædic Surgery in Jefferson Medical College.

[Reported by J. Torrence Rugh, M D., Chief of Orthopædic Department in Jefferson Hospital.]

GENTLEMEN :

You very frequently hear reference made to deformed feet and have seen many illustrative cases, but probably few of you understand the real nature of the trouble. It does not consist merely of a deformed appearance of some part or parts of the foot, but involves principles of mechanics which you should all recognize. There are a number of mechanical functions present in the normal foot, each one acting perfectly in its own capacity. When there is an absence of these mechanical actions, or when the parts cease to functionate, deformity results, and the mechanical features of the

several varieties of club-foot and the methods of correcting them will be the line of thought for your minds to-day.

The human foot is to be considered as a mechanism and involves several principles which demand consideration. It is a mechanical structure for the purpose of sustaining and moving a weight whether still or in motion; a lever having the muscles attached to the tendo Achillis as its power, the metatarso-phalangeal joint as its fulcrum, and the entire body resting upon the astragalus as its weight; hence it belongs to the second order of levers. Now, what is a lever? A

bar of metal, wood, or other substance used to exert a pressure, or sustain a weight, at one point of its length, by receiving a force or power at a second, and turning at a third on a fixed point called a fulcrum. (Webster.)

There are three kinds, as those of you who have studied physics already know. The first order embraces those in which the fulcrum is placed between the weight and power, such as the see-saw of childhood days, or the scale-beam used in weighing, and many other familiar illustrations. The second order includes those in which the weight is placed between the power and fulcrum. A given weight placed close to the fulcrum will require a smaller amount of force to move it, but the force must act through a very large distance. On the other hand, if the weight is placed near the power, it is moved through a greater distance, but requires a much greater force. Now apply this to the foot. The tendo Achillis attaches the power, the distal extremities of the metatarsal bones form the fulcrum, and the body resting upon the ankle is the weight. The weight, with reference to the power and fulcrum is placed at the junction of the posterior and middle thirds, or at one-third of the length of the lever from the end of it, or one-third the distance from the os calcis to the anterior extremities of the metatarsals, which is the distance from the os calcis to the malleoli.

Three times the strength is required to raise the weight so placed and now you will understand the great amount of force exerted by the muscles attached to the tendo Achillis in raising the body upon the front

part of the foot. The advantage of this force is that the power, acting through a small distance, is greatly increased. In the first order, with a given power and weight, there is a lesser degree of motion, but in the second, with the same conditions, a greater motion obtains. This variety is also called the "adverse lever," when the toes are raised up and the patient stands on the heel.

The third order needs only mention as including those in which the power is applied between the weight and the fulcrum, as in cranes used for raising materials through a considerable distance. Do not forget the power exerted through the tendo Achillis as you will be continually brought into contact with cases which require the recognition of this fact.

Now observe another mechanical feature of the foot. It is composed of a series of arches, one extending from the os calcis to the metatarsals and the other formed by the tarsal bones, and when the two feet are placed together a dome is formed, each foot representing one-half of it. The essential features of the arch of the foot are strength, elasticity, ease in walking, etc. Without this arch, there would be a condition of flat-foot. The normal arch rests on the heel and the distal extremities of the metatarsal bones, these parts constituting the pillars; the archway resting upon them, and the means of holding these parts together are the same as in all forms of art and architecture, or rather the means employed in the arts are the same as are found in the foot. Let me demonstrate the necessity of holding the parts together by this model, which, as you see, is composed of keystone blocks

having a band of adhesive plaster running over the outer arch and ropes within the arch from every second one centreing at the last block on one end. A small hook fastens in the centre of the under surface of every other one. Now, if the keystones were placed one above another and the arch formed, no bands to hold them together would be necessary until weight was placed upon them, and then they would slip past one another and fall.

The same obtains if the arch is made of iron bars. Tie-rods are necessary to the arch when weight is to be sustained. Every other stone in this arch is held by a tie-rod so that when drawn taut the arch is completed and made capable of supporting weight. The same thing is seen in the foot except that there is not the large number of rods running to each bone and it is better so, for if deformity began, it would be increased by having a great number of strings pulling upon the parts slipping out of position or weakening.

Now such a number of rods running across the arch obstructs it very much, so that a bridge so built would not allow ships or vehicles to pass under it. You can take away all but the lowest rod and the arch is still held in position and kept strong, but this one would still be in the way of anything passing under, so another position must be found for it. Now place the tie-rod through the hooks under the block and draw on it. You see the arch drawn into position, its strength for sustaining weight is preserved, and the archway is free from all obstruction. The effects of the tie-rods are produced in the foot by ligaments attaching the various parts together, and muscles, especially the

flexor longus pollicis, running across the archway and drawing the pillars firm so that the superincumbent weight can be supported. If the tie-rod of the arch relaxes, the arch fails, so if the muscular bands in the foot relax and weaken, flat-foot results and the impress of the foot-sole is such as is seen on this paper, made by covering the sole with blacking and then stepping on the paper. You see the entire foot-sole has rested flatly upon the paper, showing the amount of muscular and ligamentous relaxation present in the foot.

By voluntary contraction of the muscles acting upon this part, the patient may restore the arch, at the same time shortening the foot by bringing the two pillars closer together. When this action cannot be maintained it must be supplemented by an apparatus which will preserve the arch until the tonicity of the relaxed structures is re-established. When a weakening of some sustaining structures in the arch of the foot occurs, deformity results, partially from the constantly acting opposed structures and partly from the natural construction of the arch.

Another feature in the mechanism of the foot brings up the question, How does a man walk? If you will notice very carefully you will see that he does not step flat on his foot as the plantigrade animals do, but that he steps on the heel first, which is the posterior pillar of the arch of the foot, then he goes forward upon the ball of the foot, or the anterior pillar of the arch. Progression, as you see, is accomplished by a series of balancing movements, first on one pillar, then on the other, and not upon both at the same time.

This difference between men and animals can be best illustrated by pictures of two tables. This first one has a leg at each corner, representing, for instance, a horse. Now, when the horse walks he puts forward a hind foot, then the front one on the same side; then the other hind one and then the other front one—the four being necessary for the arch. He balances himself upon the four as man does upon the two. The other table, representing a man, or biped, has but two legs, yet has an arch attached to the bottom of each, which makes practically two feet to each leg. The horse has one foot on each while man has practically two on each, which gives him the upright position as the natural one and enables him to walk in a manner becoming to the highest order of animals. The method of walking is the same as that seen in the quadruped, but performed with different mechanical powers. So, you see, the functions of the foot consist of levers and powers and the ability to use them. As stated before, when there is improper action of some of the parts of the foot deformities result. These deformities are divided into six varieties, which may exist separately or may be coupled together. Of the single varieties the most common is varus.

It is that form where the mechanical functions of the lever, on the outer side of the arch, are lost, and the patient walks on the outer side of the foot, it being turned inward. The opposite of this variety is valgus, or that in which the arch of the foot is lost, the tie-rods relaxed and the entire inner sole flat on the ground with the foot turned outward. It is a form

frequently seen in colored people, from rickets or other causes. Calcaneus is that form where walking is accomplished upon the posterior pillar of the arch, the mechanical functions being lost so that the anterior pillar is drawn upward. The opposite condition is equinus, or where only the anterior pillar rests upon the ground. This is like the horse's walk, hence its name. It frequently results from one leg being shorter than the other, and the patient, in trying to touch the ground for support, can do so only with the front part of the foot.

Another form is cavus, where there is too great an arch, with consequent loss of elasticity and function, the patient stepping upon both pillars at the same time. The opposite condition is plantaris, or flatness of the sole. The foot is flattened and spread out upon the plantar surface.

Compound varieties are formed by the co-existence of two single ones, and the one most commonly seen is equino-varus, or where the foot is turned downward and inward, the patient walking on the outside of the foot and the toes. Calcaneo-valgus occurs also. In it walking occurs on the heel and inside of the foot.

These deformities are divided into two great classes according to their origin. They may be congenital, that is, existing from birth, or acquired. The causes of the congenital variety have been discussed in a previous lecture. There are numerous ways of accounting for the acquired forms, and chief among them are faulty shoes, some claim, also, stockings. Here is the cast of a deformity resulting from wearing a narrow and pointed shoe. The large toe lies directly across the

anterior extremities of the metatarsals and the other toes are crowded backward and upward. The condition is known as *hallux-valgus*, and is very marked in this case. Here is a variety of stocking called *Waukenhose*, which is made after the shape of the foot, broad and square-toed, to prevent deformity. Here is a pair made for the same purpose, but on a different plan. They are called "digitated stockings," and have a separate stall for each toe, thus keeping them from becoming deformed. By way of contrast to our own shoes let me show you a pair belonging to a lady of India. They have no heels and nothing behind to hold them to the foot, but are held by the grasping power of the toes, and this constant exercise gives to these women great power in the digital muscles. Here, also, is a pair of Japanese shoes, which, as you see, have no uppers, but are held to the foot by these V-shaped straps or bands under which the toes are placed. The arch in the shoe is preserved by the two pieces of wood upon which the sole rests, the whole thing very much resembling a small bench.

The rest of the hour will be devoted to showing you illustrative cases and giving you the means of correcting the existing conditions.

Here is a patient in whose left foot, as she stands before you, you see the conditions of *valgus*. Paralysis in the early part of life destroyed all power in the muscles controlling the foot, and it is atrophied and deformed. There is absolutely no control of the mechanical functions, and as she sits down the foot hangs in the position of *equinus*. Normal power is present in the upper part of the limb, but none below the knee.

Here is a baby with a deformity which, having seen so many cases like it, you will recognize at once. *Equino-varus* is right. The foot turns downward and inward, and again you see the effects of loss of mechanical functions. In all cases of deformities it is to this you must direct your attention if you wish to apply correctives and to secure correction.

The next patient is one in whom the arch of the foot is lost. There is pressure of the entire foot-sole on the floor as she walks, and you readily recognize the condition of *plantaris*. The scaphoid and astragalus come down and press evenly upon the floor with the anterior and posterior pillars. There is no tie-rod, the foot is splayed out, and in walking she steps but slightly upon the heel before setting the whole foot on the floor. If there was eversion of the foot *valgus* would obtain.

Here is a boy whose left foot is in the condition of *equinus*. He walks on the front pillar just as a horse. Now, what produced this mechanical loss of power and caused the foot to be so held? Contraction of the *tendo Achillis* is correct. There existed first, however, a loss of ability to extend the foot and the opposed force was unimpaired, so that the foot was drawn to the position and held firmly. In the first case there was complete absence of both forces, while in this one there still remains one. The only thing to be done in this case is to lengthen the *tendo Achillis* sufficient to allow correction of the deformity. Slight *varus* is also present. In fact, when one is present, the other is nearly always associated because of the construction of the bones forming the arch. Where *calcaneus* exists *valgus* is generally present.

Direct your attention for a moment to the consideration of rational and common-sense methods of restoring the normal functions in deformed feet. Do not only correct the appearance of the deformity. It is very easy to sever a few constricting bands and apparently secure a normal position in the deformed part, but unless you restore the powers and develop the functions of the parts your work is all in vain.

First straighten the foot by dividing whatsoever structures may be necessary, then keep it straight, first, by a mechanical appliance and then by restoring the lost forces. In paralytic cases use a mechanical device to hold the foot gently in position and endeavor to develop the muscular action so that it will suffice to correct the deformity without the aid of the apparatus. In equinus, elongate the tendo Achillis and endeavor to restore the functions of the opposed muscles, keeping the foot gently corrected in the meantime. Never apply a rigid

apparatus longer than is really necessary, as atrophy from disuse results, and complicates matters by making the already existing condition much more difficult of correction.

In four to six weeks after operation you can begin movements for muscular development, having a light apparatus applied to retain correction. The feet of the high-caste Chinese women show excellently what not to do. At five years of age they firmly bind the toes under the foot, drawing the anterior and posterior pillars of the arch as closely together as possible, and keeping them so for the rest of their life. The result is the foot is useless, it has no power in it, and cannot increase in size and strength because of the rigid position maintained. The same condition will obtain in an operative case if you apply a rigid apparatus too long, so take this one lesson with you, and, if you remember it, the hour will not have been spent in vain.

SOCIETY PROCEEDINGS.

New York Academy of Medicine—Section on Pædiatrics.

DR. HENRY D. CHAPIN, CHAIRMAN.

Meeting of November 9, 1893.

DR. HENRY KOPLIK presented a new preparation of phosphorus. Most preparations of this drug, now so generally used in rickets, were unstable, especially the oil of phosphorus, if

open to the air. He had, therefore, had a preparation of phosphorus made by dissolving the drug in sweet almond oil and enclosed in a non-actinic capsule, each capsule contain

ing $\frac{1}{120}$ grain of phosphorus. A capsule can be broken and dissolved in an ounce of cod liver oil.

Dr. Jacobi asked why the officinal elixir of phosphorus was not acceptable.

Dr. Koplik replied that it was subject to decomposition.

Dr. Jacobi said that Dr. Rice, chief chemist at Bellevue Hospital, had told him that it was a stable preparation. It was palatable and easily administered.

The subject for discussion was :

INTESTINAL OBSTRUCTION IN EARLY LIFE.

Dr. William L. Stowell presented a specimen of congenital obstruction. On the second day the bowels having not acted, castor oil was administered and followed by other cathartics. The bowels failed to act. The abdomen became distended and a large mass could be felt on the right side. All efforts to produce action of the bowel by means of cathartics and enemata were unavailing, and the child died on the fifth day. Upon autopsy the stomach was found to be normal except a slight constriction of the pylorus. The intestine, a little below the stomach, was found constricted in places, being a mere cord. The appendix was of normal size, but the cæcum was small.

Dr. Henry D. Chapin reported a case simulating intestinal obstruction in a young child. The child had formerly suffered from paralysis of the lower extremities. Symptoms of intestinal obstruction gradually developed and being unrelieved by treatment, the child died. At the autopsy, no obstruction at any part of the intestinal canal was found.

Dr. John Dorning read a paper entitled :

FORMS OF INTESTINAL OBSTRUCTION WITH THEIR DIAGNOSIS.

Clinically intestinal obstruction is divided into acute and chronic forms. The first is marked by sudden and very urgent symptoms. The second is slower and less urgent. The varieties, or more accurately speaking, the causes of intestinal obstruction are :

- (1) Congenital malformations.
- (2) Intussusception or invagination.
- (3) Volvulus or twisting of the bowel.
- (4) Constipation and faecal impaction.
- (5) Impaction of foreign bodies.
- (6) Constriction by adhesions, etc.
- (7) Stricture, the result of local enteritis.

Intussusception is by far the most common cause of obstruction in children. It is more common in males than in females, the colon being almost invariably involved. Volvulus is less common in children than in adults. In early life its most frequent site is in the sigmoid flexure. Foreign bodies are frequently swallowed by children, but they are rarely of sufficient size to cause obstruction. Round worms, if rolled into a tangled mass may obstruct the bowel, but the diagnosis would be exceedingly difficult. Constriction commonly occurs from foetal bands which are usually the result of peritonitis during intra-uterine life. Diverticula, formed by the forcing of a knuckle of the intestine through some opening may also occur. This includes hernia both internal and external.

The diagnosis of obstruction is commonly easy. The child is seized

with griping pains which become continuous. Vomiting follows, which soon becomes faecal in character. A few small passages take place accompanied by tenesmus, but absolute constipation ensues. The abdomen at first may not be tender, nor distended. Constitutional symptoms are usually pronounced from the first. The face is pale and has an anxious expression. The temperature varies. The pulse becomes rapid and feeble. An insatiable thirst tortures the patient. The features become pinched, and the skin becomes cold and clammy. Pain is no longer complained of. At the end of three to eight days the child dies in collapse.

The main symptoms upon which diagnosis is to be based are abdominal pain, persistent vomiting and obstinate constipation. In the new-born infant congenital occlusion of some portion of the intestinal canal would be probable. Intussusception is by far the most common form of obstruction in the child and should be diagnosed or excluded as the first step. Pain soon becomes constant. The abdomen at first is not distended nor tender. Vomiting may not be constant. Tenesmus occurs early and is accompanied by a number of stools from that part of the bowel not affected. They soon are composed entirely of mucous and blood. The temperature, at first normal, becomes elevated with increase of suffering, but sinks below normal as the fatal end approaches. Palpation of the abdomen will generally reveal a doughy, inelastic, sausage-shaped tumor, varying from two to six inches in length in the region of the colon. This tumor will change its position as

more and more of the bowel becomes invaginated. The lower end may sometimes be felt at the rectum or may even protrude.

Volvulus and constriction present a similar group of symptoms. There may be one or two actions of the bowels from the portion below the site of strangulation. Blood and mucus, however, do not appear as in intussusception. In volvulus, great distension is sometimes seen on one side of the abdomen, while the other is flat. This is most commonly located in the sigmoid flexure. It is often impossible to make an absolute diagnosis of the form of obstruction present. The possible existence of a strangulated inguinal or femoral hernia should always be thought of.

In faecal accumulations, symptoms, as a rule, develop gradually with premonitory symptoms of discomfort or vomiting. A doughy tumor which pits on pressure may even be detected. Symptoms simulating intestinal obstruction may sometimes arise from paralysis of the bowel, the autopsy showing no mechanical obstruction whatever.

Dr. B. Farquhar Curtis read a paper upon :

THE TREATMENT OF INTESTINAL OBSTRUCTION.

When the diagnosis of intestinal obstruction is made the only treatment is surgical. It is a mechanical condition and can only be removed by mechanical means. It has now been 300 years since the first laparotomy was performed for this disorder. Early treatment is of the utmost importance and extreme surgical measures to be successful must be resorted

to early. Injections to be successful must be done scientifically. The use of Davison's syringe is inadvisable, for there is no means of determining the amount of pressure used. The syphon of carbonic water which has been proposed and sometimes used is dangerous. The bowel can be easily ruptured by the force of the escaping gas. The plan proposed by Dr. Forest is to be highly commended. It is proved that the elevation of a receptacle containing water, each two and one-third feet, will develop pressure of one pound per square inch. The healthy bowel of a child will sustain a pressure of eight pounds. Six pounds may be safely used. Hence the elevation of a receptacle may be as high as twelve or fourteen feet. A much less height should be tried at first. It is not safe to use this pressure after twenty-four hours, for inflammation and swelling may occur after that time. Water is preferable to gas. If puncture does occur it is less likely to carry matter with it into the peritoneal cavity.

While using an injection it is important to know whether the intussusception has been reduced or whether puncture has occurred. It is impossible to tell by palpation. The surest guide is liver dulness. If that disappears suddenly, puncture has occurred. Injection should never be used unless a tumor can be felt.

Enterostomy is an operation which may be resorted to when the child is moribund and a full laparotomy would be impossible. If the obstruction can be relieved, there need be no fear whatever that the artificial anus will persist. It will quickly close without trouble.

Laparotomy should be resorted to

when injections have failed. The mortality from this operation, during recent years, has been markedly decreased and it seems likely that it will be more so in the near future. The dangers of this operation are shock, prolapse of the bowel and tearing. These dangers are all diminished by early operation. Shock is to be avoided by quickness of operation, care in the administration of the anæsthetic and in the maintenance of warmth. The intestines should be handled as little as possible, and should be kept well covered with hot towels. Only an experienced hand should administer the anæsthetic. The incision should be as small as possible and only the portion of the bowel involved should be brought out. Adhesions form at varying intervals, sometimes within four hours, sometimes only after many days. Adhesions and swelling sometimes render the tumor irreducible. More or less œdema is present, but it can be partially relieved by grasping the mass with the whole hand and making gentle but firm pressure, forcing out the serum. All violence should be strictly avoided.

Dr. J. Lewis Smith said that he had seen one case in which a mass of worms had cause fatal obstruction. Diarrhœa or irregularity of the bowels commonly preceded an attack of intussusception. The child showed signs of serious illness from the very first. The great majority of cases in children occur under two years. By far the most common form was that beginning at the ileo-cæcal valve. He had seen it so extreme as to protrude ten inches from the anus. Blood appears in greater amount in infants than in children. Purgatives should

be strictly avoided when this condition is suspected. Force from above must increase the trouble. Force from below was the only possible means of relief without operation.

Dr. Willy Meyer said that the early formation of adhesions was the most serious complication, and rendered cases difficult to treat. An anæsthetic should always be given if diagnosis could not be made without, a correct diagnosis being of the most vital importance. He had performed laparotomy in two cases. Each of these had shown interesting points regarding the disease, but operation had been refused until adhesions and more or less swelling had taken place. He did not believe that reduction could be effected in serious ileo-cæcal intussusception by means of injections.

Dr. W. E. Forest strongly objected to this statement. He had reduced a case by injection in which the ileo-cæcal valve protruded from the body. In this case he used a syphon of Vichy water attached by a rubber tube to a medium-sized vaginal syringe. He allowed but one drachm to escape at a time and persisted in this effort for an hour, when the whole mass was reduced and recovery was complete. Since then he has made extensive investigations and evolved a plan of treatment by hydrostatic pressure. Five children have been treated by this plan with four recoveries. In the fatal case the child was almost moribund. Even then the intussusception was reduced, but the child died a few days afterward. The normal intestine will bear six pounds pressure to the square inch without injury. In every case, practically, in children we have intussusception—an intus-

susception of the colon. Treatment by the Davidson syringe is faulty, for the pressure is intermitting and may vary from two to ninety pounds. It is quite possible for a man to produce the latter pressure with that instrument. The pressure must be steady, slow and continuously applied for at least one-half hour. Such pressure accomplishes more than can be accomplished by the operator's hand externally. It is applied in every direction, and on the tissues which bind the invaginated portion of the bowel and distends the sack as well, thus making reduction far easier. It is also elastic pressure, and not applied along certain lines. For accomplishing this a fountain syringe should be used, with a large-sized tube and a long tip. The tube should be wound with bandage so as to produce a cone-like projection which shall fully occlude the rectum. Each two and one-third feet elevation will add one pound per square inch pressure. The bag may therefore be held twelve or fourteen feet above the patient, but less pressure should be tried at first. After the end of the second day it is not safe to use so much pressure, for peritonitis may have caused adhesions to form and sloughing. If this plan fails, laparotomy should be resorted to.

Dr. F. Kammerer reported two cases upon which laparotomy had been performed, one case being successful. If the operation is performed before tympanites becomes extreme, success is far more probable.

Dr. Samuel Lloyd said that statistics of laparotomy were of little value, for the operation had thus far been done so late. Operation should be performed early if success is to be expected. Caution must be exercised

in the use of pressure, for fatal rupture may easily result.

Dr. A. Jacobi said that he had long ago given up the use of gas. Water is the only agent which should be used. A form of obstruction in young children is that which results from a long sigmoid flexure, which is so common in young children. It is frequently found lying on the right side.

It may consist of three curves. A mass forced down upon these flexures from above may cause serious and even fatal mechanical obstruction. Such a condition may stimulate imperforate rectum, for a tube cannot be passed through their windings. Injections should be persisted in with the new-born infant, and operation performed as a last resort.

ABSTRACTS FROM CURRENT LITERATURE.

Foreign Bodies in the Ear in Children.

NATIER (*Rev. Méd.*, September 18, 1893) reports several cases and discusses the treatment. He deprecates undue haste in endeavoring to extract the foreign body, and when simple means fail advises abstention from manipulation, since the evil results from the retention of the foreign body are much less than those from violent attempts at removal. He quotes Politzer's dictum that "the consequences attributed to the foreign bodies are, with rare exceptions, pro-

voked by unskilful attempts at extraction undertaken by unpracticed hands." Natier recommends perseverance in the use of forcible injections, and states that the chief contra-indications to this method are when the foreign body is the bone tip of a lead pencil, or when the syringing causes violent vertigo, or when there is a perforation of the tympanic membrane. He condemns the use of a loop of metallic wire.

Papain with Carbolic Acid in the Treatment of Diphtheria.

LEVY and KNOF (*Berlin. klin. Woch.*, No. 31, 1893) speak highly of a combination of papain and carbolic acid as a solvent of the false membrane in diphtheria. In the Children's Clinic at Strasburg they employ the following:

R. Papain,	10 parts.
Liquid carbolic acid,	5 parts.
Distilled water, q. s. ad.,	100 parts.

During the first two hours this solution is applied every ten minutes,

and later only every two hours. Under the influence of the applications the false membrane rapidly disappears, but since it speedily returns after the suspension of the treatment, it is essential to renew the applications on the reappearance of the membrane. Under this treatment the mortality was 29 per cent., but the author remarks that in many of the fatal cases death was directly due to some grave complication.

Statistics of Intubation of the Larynx.

BY F. E. WAXHAM, M.D.,
DENVER, COLORADO.

AGE.	NO. OF CASES	RECOVERIES.	PERCENTAGE.
Under 1 year	13	4	30.76
1 year	62	13	20.96
2 years	84	25	30.86
3 "	85	32	37.64
4 "	90	35	38.88
5 "	43	19	44.18
6 "	26	7	26.92
7 "	29	10	33.33
8 "	13	8	61.53
9 "	7	3	42.85
10 "	7	3	42.85
11 "	1	1	100.00
12 "	3	0	00.00
13 "	1	0	00.00
14 "	1	0	00.00
20 "	1	0	00.00
36 "	1	0	00.00
43 "	1	1	100.00
60 "	1	0	00.00
	466	161	34.54

Congenital Dislocation of the Scapula.

Two interesting cases of this form of congenital malformation are reported by SCHLANGE (*Arch. für klin. Chir.*, Band XLVI, Heft 2, 1893). The first occurred in a girl 14 years of age. The mother first noticed it at 4 years of age. Her history shows a childhood healthy in all respects with no serious illnesses. The present condition showed the right scapula raised two inches higher than the normal; the bone and muscular structures were normal, with the exception of a shortening and thickening of the trapezius. The function, however, remained unimpaired, as also that of the entire shoulder, except that the arm on that side cannot be raised entirely perpendicular, but remained at

an angle of 170° . In the upper part of the vertebral column there is a scoliosis with the convexity towards the affected side. The second case, though entirely similar in character, occurred in a laboring man 30 years old, who came into the hospital complaining of rheumatism; there was the same elevation of about two inches in this case; the power of extension above the head was slightly curtailed, but the movement of the scapula allowed compensation, and the patient never knew of the deformity until he came to the hospital. In this case there was, however, a congenital asymmetry in the development of the two sides of the face.

Submaxillary Mumps.

WERTHEIMBER (*Munch. Med. Woch.*, August 29, 1893) reports a case of submaxillary enlargement and inflammation, which through its prodromes, symptoms and course, proved itself to be a form of parotitis, or at least was caused by infection from true parotitis, and produced parotitis in other cases, and, therefore, might be termed submaxillary parotitis.

There were the ordinary prodromes and symptoms, except* that the swelling was not in the parotid gland, but in the submaxillary, and three days later the submaxillary of the other side became swollen, but to a less extent. The patient recovered, and fifteen days after its infection the mother had a marked attack of parotitis.

WACKER (*ibid*) reports similar cases in which the parotids were not involved, but the disease showed itself in the submaxillary glands.

There were four cases in one family, in children, varying between 1 and 5 years, the first symptoms appearing in all within five days. These cases were evidently inflammations of the submaxillary gland, caused by infection from the poison of the parotitis epidemica. The mother of these children was attacked, fourteen days after the first case showed itself, by a normal form of the disease, and, further, three other adults were infected. It is from this easily conceivable that the infecting agent in parotitis epidemica can infect any gland, and has only a selective tendency for the parotid.

The Contagiousness of Diphtheria.

The etiology of this disease has not been proven to be bacteriological, and as far as A. GOTSTEIN (*Berl. klin. Woch.*, No. 25, 1893) has observed, we can say nothing more definite of it than that it has, through experimentation, been proven that there is a specific, constantly present, though uncommonly fluctuating virulent cause. The contagiousness he studies in fifty cases, with special reference to its relation to consanguinity. Twice he found cases of contagion. In none of the fifty cases was contagion entirely disproved, although it was often unlikely. It happened often that the same parents or their relatives had lost children by diphtheria in former years in other places. By these fifty cases eighty-

three relatives (children) were endangered, but only fourteen cases took the disease, while four others contracted it from the same source. Thirty-six cases were not contagious to sixty-two persons in better circumstances, who were exposed. The ratio of contagiousness to virulence is shown in that of the fourteen cases which infected others, eight died, while they infected only eighteen of the eighty-three children exposed, and of these only those whose condition made them susceptible. The predisposition to contagion in diphtheria cannot be, therefore, great, not even like measles, which has about 99 per cent. of contagiousness. A purely contagious theory is for this author untenable.

The Bacteriology of Vulvo-vaginitis in Children.

M. BERGGRÜN (*Arch. für Kinder-
heilkunde*, xv, 5 u. 6) divides vulvo-
vaginitis into three forms: The gonor-
rhœal, the purulent and the catarrhal.
The first is the most frequent; in
thirty-one cases it occurred fourteen
times, while the others were seen
seven and ten times respectively.
The gonorrhœal is always infectious
in origin; it is not always easy to
find its source, but usually it is de-
rived from the parents or a nurse,
either through sleeping in the same
bed or through the use of a common
towel. The examination of the secre-

tions should be microscopical alone,
but the author recommended the
culture methods of Wertherin and
Winkler. The purulent vulvitis is,
in the great majority of cases, pro-
duced by the staphylococcus pyo-
genes or streptococcus, and generally
results from the infection of a wound.
The catarrhal variety, so common
among scrofulous and anæmic chil-
dren, has not a certainly established
microbic source, and it appears to be
a general state rather than a local
lesion.

Diabetes Mellitus in Infancy.

DUFLOCO and DAUCHEZ (*Rev. de
Méd.*, June 10, 1893) report a case
of diabetes mellitus in an infant, aged
18 months, which ended rapidly in
coma. The child had been somewhat
ill for about two weeks prior to the
first visit of the physician. When
first observed the symptoms were in-
tense thirst, a weak, rapid pulse, con-
stipation, cyanosis of the face and
emaciation. The mother attributed
the illness to teething. On the day
following, the child grew rapidly
worse, became comatose, and died in
a few hours.

Under the age of 2 years diabetes
mellitus is extremely rare, and the
authors could find only two recorded
cases of coma. Külz and Leroux col-
lected 150 cases of diabetes mellitus
in childhood; of these, nine were
under 2 years of age. Berlioz, in
20,000 urinary analyses detected
sugar in the urine of a child (aged 3½
years) only once. The authors also
refer to the rapid course which dia-
betes pursues in infancy.

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ORIGINAL COMMUNICATIONS.

The Diagnosis of Pelvic Inflammatory Diseases.¹

BY HOWARD A. KELLY, M.D.,

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Baltimore, Md.*

So much attention has been paid to the treatment of pelvic inflammatory diseases that I feel it will not be amiss to devote my remarks on this occasion exclusively to the diagnosis. To the general practitioner the importance of appreciating the grounds upon which the diagnosis of these affections is made, is a matter of the greatest importance, and to him I desire especially to speak.

That a consideration of this subject from this stand-point is called for at present, cannot be questioned, for I find upon analyzing the last 200 cases in my private case-book, many of which have been referred to me by physicians at a distance, that thirty-two, or 15.5 per cent., had no pelvic

disease at all; in other words, an error in diagnosis had been made.

We will consider, therefore, first, in what way pseudo-pelvieo-peritonitis simulates true pelvieo-peritonitis; and, second, what are the means of making a differential diagnosis between *pseudo-pelvieo-peritonitis* and true *pelvieo-peritonitis*.

The term "pelvic inflammatory disease" includes all affections of the tubes and ovaries resulting from infection of these organs or the pelvic peritoneum, also all inflammatory conditions resulting from traumatism or other causes not directly traceable to infection.

As the result of this inflammatory process plastic lymph is thrown out, forming adhesions between the uterine appendages and the adjacent

¹ An address delivered before the Southern Surgical and Gynæcological Association.

peritoneum and pelvic walls, pelvic floor, posterior surfaces of broad ligaments or uterus; *it is by means of these adhesions that true pelvic inflammatory disease is diagnosed.*

This concomitant inflammation of the peritoneum is called according to its location perisalpingitis, peri-oöphoritis or perimetritis. The more common affections of the tubes and ovaries exciting this inflammation of the peritoneum are salpingitis, pyosalpinx, tuberculosis and abscess of the ovary, and hydrosalpinx is often associated with it.

PSEUDO-PELVEO-PERITONITIS.¹

Pseudo-pelveo-peritonitis is usually found in hysterical women who furnish many of the symptoms of, and present a history often closely analogous to, true pelvic peritonitis.

Such cases have usually been long under the family doctor's charge, when they are referred to the specialist. Their history is one of dysmenorrhœa, extending over many years, intense enough in some instances to confine the patient to bed for two or three days at each period. Many of these patients are regularly addicted to opium or the bromides and the milder sedatives. Douches, plasters, blisters and topical applications, per vaginam, have usually entered largely into the treatment.

As a consequence of the opium habit a well-marked cachexia is often present, which may prove misleading. A certain number of these patients have spent days or weeks in bed on account of pains in the lower

abdomen, simulating and thought to be peritonitis.

From these symptoms the medical attendant often concludes that his patient has "ovaritis," "salpingitis" or "pyosalpinx;" and if, upon a superficial examination of the lower abdomen, the patient complains upon pressure over one or both ovarian regions, and a digital examination discloses marked tenderness at the vaginal vault, sometimes amounting to "excruciating pain," the doctor considers the diagnosis well established.

The irresistible impression made by such a complex of symptoms as these—constant or frequently recurring pain in the lower abdomen, extreme tenderness, cachexia, and loss of health—is that a serious pelvic inflammatory affection is present.

Upon such grounds, therefore, the diagnosis of "inflammation involving the tube and ovary," and often of "pyosalpinx," is erroneously made.

The correct method of making a diagnosis of pelvic inflammatory disease is the following:

TRUE PELVEO-PERITONITIS.

All these symptoms just detailed must be considered as of subsidiary value in making a diagnosis, for it is often true that in the most aggravated cases, in which there is a large accumulation of pus, dysmenorrhœa may not be present, and the patient may be free from pain for long intervals.

Fever is a sign of value, but it is more frequently absent than present, only being observed when there is absorption from the diseased area. A collection of pus well encapsulated, as a rule, gives rise to no fever what-

¹ The prefix "pseudo" is not used in a strictly scientific sense. It is employed as a convenient catchword to designate affections which convey the impression of being what they are not.

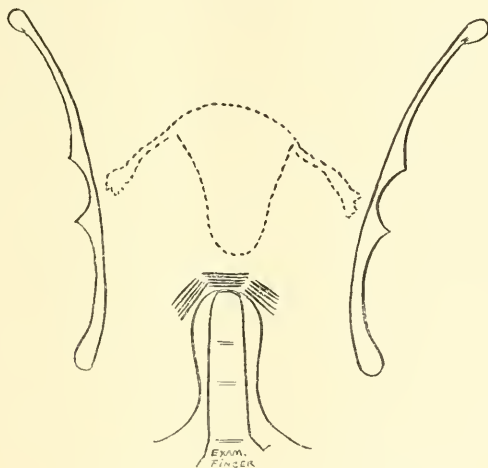
ever. Although in these pus cases emaciation and cachexia are sometimes extreme, it is possible, on the other hand, for a patient to have a pelvic abscess, and yet remain in blooming health in spite of the abscess.

Even when the patient gives a history of free discharge of "pus" from the vagina, this is not significant unless it has been carefully inspected

examiner must demonstrate evidences of alterations in the *size, consistency* or *mobility* of ovary and tube. If the cervix uteri cannot be easily displaced upwards, but is more or less immobile, and hard resisting surfaces are felt lateral to the uterus, the diagnosis of pelvic inflammatory disease may be made. (Fig. 1.)

Marked pain or wincing under the examination, and an ill-defined sense

FIG. 1.



Area of board-like induration indicated by heavy parallel lines.

by the physician, for patients often confuse muco-purulent leucorrhœal discharges with the discharge of an abscess.

The essential points in the diagnosis of pelvic inflammatory disease are discovered by a direct examination of the diseased organs by rectum, vagina and lower abdomen. In every case the lower bowel must be freely evacuated before the examination is made. In the course of this investigation the

of resistance do not justify a diagnosis of any kind.

The inferior and posterior surfaces of resisting masses detected through the vagina can be most distinctly felt by the rectum, filling out an area corresponding to the base of one or both broad ligaments.

A peculiar roofed-in, board-like hardness on one or both sides of the vaginal vaults often characterizes pyosalpinx and ovarian abscess.

Where the evidences of disease are not so distinct as in the cases just detailed, and by digital examination through the vagina one is not able to detect more than a small mass of doubtful identity lateral to the uterus, a bimanual examination through the rectum and abdomen will often demonstrate this to be an inflamed adherent mass attached to the broad ligament.

In making examinations by the rectum, it is necessary, in order to palpate the pelvic structures clearly, to introduce the finger up beyond the ampulla or rectal pouch, through the utero-sacral ligaments behind the uterus.

Still more exact than the method just described is the *bimanual examination under anæsthesia*.¹

Several hundred cases are anæsthetized in my clinic at the Johns Hopkins Hospital yearly, for the sole purpose of making an exact diagnosis, and I cannot sufficiently commend this method for the increased facilities of investigation which it affords.

THE TRIMANUAL EXAMINATION.

Where the ovary or the ovary and the tube are bound down by velamentous or delicate bands of adhesions, there are often no alterations in the size of these organs, and the amount of mobility still retained may be so great as to prove deceptive to the ordinary vaginal or rectal examination.

Under these circumstances the most perfect method of examining the pelvic structures at our disposal must be employed to establish the diagnosis,

and we have recourse to the *trimanual examination conducted at the same time by the vagina, rectum and abdomen, under anæsthesia*. To avoid giving the anæsthetic twice, not infrequently in my hospital practice the minute examination is made immediately before the operation. Several times I have returned patients from the operating table to the ward with the note, "structures sound, operation not called for." It had appeared, from the history and the ordinary bimanual examination in these cases, that there was serious pelvic disease present. The efficiency of the trimanual examination depends upon the fact that *the normal uterus can be drawn down to the vaginal outlet without harm, and the tubes and ovaries also becoming displaced in proportion to the displacement of the uterus, are thus brought within easy touch*. To dispense with an assistant, I have devised a third hand for the examiner in the form of a flat tenaculum, corrugated on one side to prevent its slipping under the fingers. The tenaculum is introduced into the vagina and hooked in the anterior lip of the cervix, which is now drawn gently down toward the outlet. (Fig. 2.)

If resistance is felt at any point, the traction must not be carried further until the cause of the resistance is ascertained. The corrugated handle is now grasped between the ball of the thumb and the last phalanges of the third and fourth fingers, and the uterus is thus detained in its artificial descensus, while the index finger of the same hand is inserted into the rectum and easily carried up to the top of the uterus and laterally over the broad ligament, ova-

¹ v. Johns Hopkins Hospital Reports, Gynecological Fasciculus, No. 11.

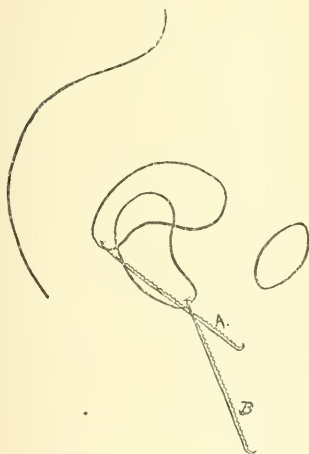
ries and tubes. The ovaries are detected in doubtful cases by means of the utero-ovarian ligaments, always recognizable as prominent cords in the broad ligament immediately below the cornua uteri. (Fig. 3.) Upon running the finger out one of these cords, 1.5 to 2.5 centimetres (one-half to one inch), it comes in contact with an abrupt enlargement, which is always the ovary. If this is large, ill-defined in outline and more or less fixed, the

ciated with pain in the ovarian regions produced by deep abdominal or vaginal palpation, cannot *per se* establish a diagnosis of pelvic inflammatory disease.

(2) An attempt to make a diagnosis without directly palpating the pelvic organs is at best but more or less clever guess-work.

(3) The diagnosis can be made with certainty when resisting masses are felt choking the posterior half of the

FIG. 2.



Position A.—Tenaculum caught in cervix. Position B.—Uterus drawn down into vagina.

diagnosis of inflammatory disease may be made at once. In order to exclude inflammatory conditions, the finger must be passed around the ovary, clearly outlining its border and surfaces as it is lifted on the palpating finger. In this way the most delicate adhesions will be discovered.

In conclusion, let me briefly recapitulate:

(1) The history of the patient, asso-

FIG. 3.



Utero-ovarian ligament used as a landmark in locating ovary. All surfaces of ovary brought into easy touch by means of corrugated tenaculum.

pelvis at the sides and behind the uterus.

(4) It is possible in this way sometimes to mistake a retroflexed fundus, an extra-uterine pregnancy or a myoma, for inflammatory disease. This error on the part of the general practitioner, however, is in the right direction, calling for a more exact investigation or consultation with a specialist, and is therefore not detrimental to the patient.

(5) For a more delicate appreciation of the exact condition of the pelvic organs, and in many cases in order to make any diagnosis at all, a bimanual examination by rectum and abdomen under anæsthesia is necessary.

(6) The writer's trimanual method of examination by rectum, vagina and abdomen, is the most accurate of all, serving to detect the slightest irregularities of the uterus and ovaries, as well as the most delicate adhesions.

Extra-uterine Pregnancy, with Report of Cases.¹

[PLATES I AND II.]

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IN this paper I will not attempt to advance anything new and original upon the subject of extra-uterine pregnancy, but will report briefly a series of cases that have come under my observation during a period of nineteen consecutive months.

CASE I.—Mrs. D., aged 30 years. Married at 17. Has had two children and five miscarriages. Last pregnancy, April, 1886. Has been in poor health seven years. First menstruation at 13 years of age; severe dysmenorrhœa, with scanty flow, lasting five days, and appearing every three weeks since last miscarriage, which occurred seven years ago.

The dysmenorrhœa has been more severe since an operation for the repair of a lacerated cervix in 1888. Last regular menstruation June 14, 1891. July 5 menses reappeared; flow scanty, black in color, containing shreds and lasting four weeks. July 24, while attending to her household duties, she complained of colicky pains in left iliac region, and subse-

quently extending over the abdomen. Three days later the pains were followed by chills. A physician was called, who treated the patient one week without making a vaginal examination or diagnosis, or giving her any permanent relief.

At 3 A.M., August 2, 1891, I was called to see the patient, and learned that she had been suffering severe pain in the abdomen for some eight or ten days; that menstruation had continued for about four weeks, the flow being scanty, black and shreddy; there had been no cessation of menses and no history of pregnancy. At the time of my visit she was having severe paroxysms of pain in left iliac region, with frequent severe chills. Pulse 90, temperature 100°. Vaginal examination revealed a large, very painful, pulsating mass in the left pelvis. Right tubal and ovarian enlargement, with adhesions.

I promptly made a diagnosis of extra-uterine pregnancy with rupture of the tube, and advised abdominal section. Operation refused. Gave morph. sulph., $\frac{1}{4}$ grain, hypodermat-

¹ Read before the American Association of Obstetricians and Gynecologists, at Detroit, June 1, 1893.



PLATE I, FIG. 1.

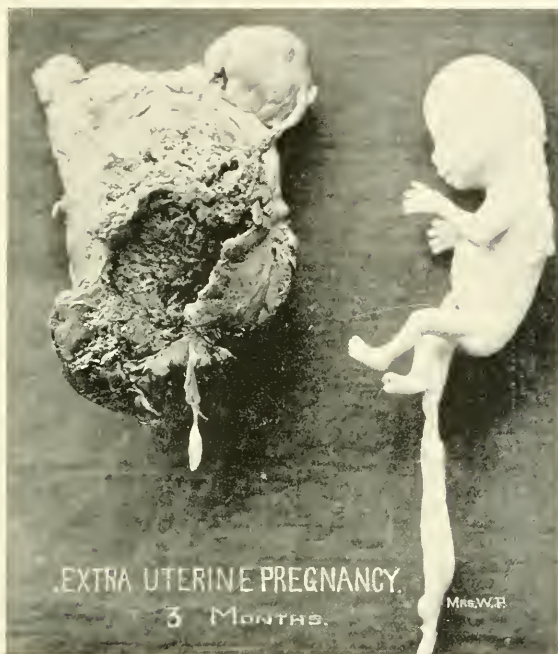


PLATE II, FIG. 1.



PLATE II, FIG. 2.

ically, for the relief of pain. 11 A.M., pulse 100, temperature 100°, pains and chills more frequent and severe; some tympanites and considerable tenderness in left iliac region. An operation was again urged, but consent was not obtained.

6 P.M. Symptoms very much aggravated, pulse 110, temperature 100 $\frac{2}{5}$ °. Patient much weaker. She was now ready to follow suggestions made at previous visits, and was at once sent to the city hospital and prepared for an early operation.

On August 3, at 9 A.M., assisted by Drs. A. M. Clark and W. H. Beuchner, and in the presence of the hospital staff, I opened the abdomen and found the cavity filled with loose and clotted blood. The left tube and ovary were bound down by adhesions, and were quickly shelled out, ligated and cut away. The tube was found to be ruptured and contained placental tissue. No fœtus was discovered. The right tube and ovary being diseased were also removed. After thoroughly irrigating the abdominal cavity with distilled water, a glass drainage tube was placed in position and the incision closed with silkworm-gut. With the exception of a severe diarrhœa, lasting from the sixth to the tenth day, my patient made an uninterrupted recovery, and left hospital August 31, four weeks after operation.

CASE II.—Mrs. J. R. T., aged 31 years, a large fleshy woman weighing 190 pounds, has had five children and two miscarriages. Youngest child eighteen months old. Age at first menstruation 13; flow always regular and painless until March 25, 1892, the first menstrual period since birth of last child. At this time the flow was very free and dysmenorrhœa severe.

April 22, the flow was not so free, but dysmenorrhœa still severe. April 29, one week later, the flow reappeared, but the discharge was scanty, black in color and contained numerous shreds.

May 17, while at the stove preparing dinner, she was seized with colicky pains in the left iliac region, radiating over the entire abdomen, accompanied by considerable nausea and a slight feeling of faintness. She was assisted to bed and a physician sent for, who gave her temporary relief. She was soon able to be out of bed, but unable to attend to her usual household duties.

From April 29 to June 16 the discharge from the vagina continued. The nausea and colicky pains were so frequent and severe that she was obliged to spend the greater part of the time in bed. While on her feet, she would complain of severe backache and a feeling of weight in the left side as though something ought to come away. I was asked to see the patient in consultation with Dr. J. B. Kotheimer, June 15, 1892.

The patient was in bed with limbs flexed, and complained of considerable pain over the entire abdomen, but more especially in left iliac region. Examination per vaginam revealed a large boggy mass in the region of the left tube and ovary. Uterus crowded to the right, but not enlarged. A diagnosis of extra-uterine pregnancy was made and immediate operation advised. She consented at once, and was removed to the city hospital June 16. At 2 P.M., June 17, assisted by Dr. Joseph Price, I removed the left tube and ovary. The tube, which was very much enlarged, was ruptured during the removal, and contained blood-clots and placental tis-

sue. No fœtus was found. The right tube and ovary being diseased were also removed. The adhesions of both tubes and ovaries were quite dense. There was a very small amount of clotted blood in the abdominal cavity. The cavity was thoroughly irrigated and drained and the incision closed with silkworm-gut. She made an uninterrupted recovery and left the hospital in five weeks. May 5, 1893, the patient has steadily improved in health and now weighs 234 pounds.

CASE III.—Mrs. D. E., aged 28 years; married three years; one child, 16 months old and still nursing; no miscarriage; age at first menstruation 13 years; always regular, but very painful. Menses reappeared one month after confinement, recurring every twenty-eight days and no dysmenorrhœa. Last regular flow November 7, 1892. Menses expected December 5, but did not occur until the 8th. The discharge was scanty, very dark and shreddy, and continued five days. December 13, during a shopping expedition, she commenced flooding, which continued until the 16th, when all discharge ceased.

On December 24, at 1 P.M., while sweeping, she was suddenly seized with severe pain in the right iliac region, extending over the entire abdomen and accompanied by severe vomiting. She ran to a neighboring house for help, and upon her return fainted. I first saw her at 2 P.M. The pain was severe and extended over the whole pelvic region. She was very restless, with continued nausea and vomiting, face flushed, pulse 67, temperature sub-normal. Examination externally. Exquisite tenderness in the region of the right ovary, the slightest pressure producing violent

vomiting. Per vaginam, the organs were apparently in a normal condition. At this time it was impossible to obtain any previous history from the patient. I gave, hypodermatically, morph. sulph., gr. $\frac{1}{4}$, and ordered drachm doses of Rochelle salts every hour until bowels moved. At 3 P.M., while being removed to her sleeping room down-stairs, she fainted twice.

8 P.M. Almost pulseless; face and lips bloodless; sighing respiration; cold, clammy perspiration over the entire body, and presenting all the symptoms of complete shock due to an internal hæmorrhage. She had rejected the Rochelle, and was still suffering severe pain; examination per vaginam now revealed a tender, boggy mass in the right ovarian region; I gave, hypodermatically, strychnine sulph., gr. $\frac{1}{25}$, and applied external heat; a diagnosis of ruptured tubal pregnancy was made, but in her present condition I did not think an operation advisable. At 10 P.M., patient reacting nicely, under half-hour doses of strychnia, gr. $\frac{1}{25}$. Dr. J. J. Thomas at this time saw her in consultation, and confirmed my diagnosis. I secured a trained nurse, and ordered hypodermics of strychnine, and ergotine every hour during the night; at midnight reaction was still going on nicely.

9 A.M., December 25. Reaction complete; pulse, 120, and quite strong; temperature, 100° ; color more natural; and suffering no pain, while lying on one position upon her right side; an operation was now suggested and urged, but the family would not consent, on account of her weak condition; I advised the nurse to quietly prepare for a section, and I would return at 5 P.M.

6 P.M. I asked Dr. A. M. Clark to see her in consultation; peritonitis was now rapidly developing; abdomen tympanitic; pulse, 134; temperature, $101\frac{2}{3}^{\circ}$; features pinched, and expression anxious. A section was again urged, and after some hesitation the family consented.

At 8 P.M., thirty-one hours after the first rupture, assisted by Drs. A. M. Clark, Booth, Welsh and Montgomery, I opened the abdominal cavity, which was found to contain about three pints of loose and clotted blood; rapidly brought to view, ligated and cut away the right tube and ovary; the left tube and ovary being healthy were not removed; I then thoroughly irrigated the cavity (using twelve gallons of distilled water), inserted a drainage tube, closed the incision with silkworm-gut, and put my patient to bed; pulse, 130; very weak; the shock following the operation was well marked, but she reacted nicely during the first twelve hours, made a good recovery, and was discharged four weeks after operation. The specimen was sent to J. Whitridge Williams, M.D., for examination. The following is the report:

Specimen from Dr. Peck, consisting of the right tube and ovary; the tube being the seat of a very early stage of extra-uterine pregnancy; the tube is 6 centimetres long and 4 and 6 millimetres at its thinnest and thickest parts; the fimbriated extremity is free, and there are no adhesions on the extremity of the tube; the lateral half of the tube presents three twists; near the lateral end is a small hydatid, 5 millimetres in diameter; the uterine end of the tube, for a distance of several millimetres, appears perfectly

normal; then it suddenly expands into an oval mass, 2 centimetres in length, and 1.5 centimetres in diameter; the most prominent portions of this mass present a reddish appearance; on its posterior surface, just about its middle, is a vertical split, 8 by 3 millimetres, through which protrudes what appears to be a blood clot; this represents the point of rupture of the tubal pregnancy.

The ovary measures 3, 1.5, 1.5 centimetres in its various diameters; its surface is smooth, and presents no adhesions; on section no trace of a corpus luteum is seen; near the surface are a considerable number of small follicles, while its central portion is quite dense.

Microscopic examination: On cutting serial sections of the portion of tube involved by the pregnancy, it is found that its lumen presents most interesting conditions, which may be roughly outlined as follows:

The uterine end is perfectly intact for a short distance, then it gradually becomes filled with canalized fibrin, so that at one point the lumen is all but obliterated; then the lumen increases somewhat in size, and is markedly flattened out, and the pregnancy at first appears to be connected with only one side of it; the lumen may be traced from its uterine end to the point of rupture of the sac, when all trace of it is lost; it appears at the lateral side of the rupture, and from thence on, it may be traced to the fimbriated extremity.

At first, in the neighborhood of the point of rupture, it appears as a narrow slit with the pregnancy connected with only one side of it; then further on toward the fimbriated extremity

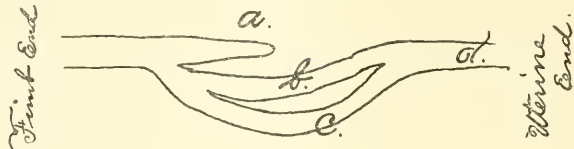
one finds two lumina on section, and soon a third appears; on following them up, the third lumen is the first to disappear, and then the second, so that at last there is only one lumen left. This can be readily explained, going from the fimbriated extremity toward the uterus, by supposing that the lumen bifurcates at one point, thus forming two lumina; and that at another point the second lumen also bifurcates, thus making three lumina in all; then one lumen ends blindly (see drawing) at (*a*) as a mere cul de sac, and the other two lumina (*b* and *c*) coalesce once more, and form a single lumen (*d*). This is readily seen on going over the serial sections. As well as we can make out, the preg-

other ovary, and that we have to do with a case of internal migration of the ovum.

A point of great interest is the branching of the lumen, and especially the blind ending of one of the branches. We are unable to say why the ovum should have been arrested as it was; but it is perfectly evident that a tubal pregnancy would have inevitably occurred had a fertilized ovum been driven into the blind end or cul de sac *a*.

CASE IV.—Mrs. W. P., aged 30 years; twice married; first time at 17, second at 25; one child at 18 years; no miscarriages; age at first menstruation 13 years; always regular, and flow painless; has always enjoyed

FIG. 1.



nancy originated in the lumen *c*, and continued into *d*, and was not connected at all with either *a* or *b*.

At no part of the tube was any trace of the fœtus seen, but there was a very marked formation of placental tissue, so that the process may be designated objectively as a tubal mole. The specimen clearly shows that the decidual cells are derived from the fixed cells of the tube, and also shows beautifully, in several instances, the development of giant cells from the endothelium of the blood-vessels.

The ovary is perfectly normal, and shows absolutely no sign of a corpus luteum, so that we are obliged to conclude that the ovum came from the

good health; last regular menstrual flow December 1, 1892. January 21, 1893, while lifting a tub containing water, she was seized with severe pain in the right iliac region, extending over the lower portion of the abdomen; her physician, Dr. M. S. Clark, was called at 5 P.M.; he found her suffering severe pain, with an anxious expression of countenance, and a weak, thready pulse of 120; temperature, 101°; during the past three weeks she had complained at times of colicky pains in the right ovarian region; nausea was persistent, and her breasts were enlarged and sensitive; hot applications were ordered, and anodynes given.

7 P.M. Pain not so severe, slight

vaginal discharge of black, stringy blood; abdomen tympanitic and extremely sensitive; examination per vaginam; uterus enlarged, os closed, cervix soft, and a mass in the right broad ligament; the doctor suspected a ruptured extra-uterine pregnancy, and so informed the husband, adding that, if such was the case, an operation would be necessary; at midnight the severe pain had gradually subsided; pulse full and strong.

January 22. Pulse, 100; temperature, 99°; has had frequent evacuation of the bowels; abdominal tenderness very much diminished, except in the left iliac region, which still continued full and tender; vaginal discharge has ceased.

January 23. Bowels continued to move freely; fullness in left iliac region entirely disappeared; sat up the greater part of the day; an effort to stand or walk causes pain in the right ovarian region.

January 28. Has been feeling much better, and doing light housework, contrary to all advice.

January 29. Physician sent for in great haste; stomach rejects everything; abdomen tympanitic; pains severe; at times quite regular, and accompanied by a slight vaginal discharge of black, stringy blood; an operation was now advised, but refused.

January 30. In addition to other symptoms complains of pains in shoulders, arms and limbs. Some difficulty in breathing, due to pain in intercostal muscles. Urine heavily loaded with urates. Gave salol, antikamnia and quinine, ãã grs. 2, every four hours.

February 4. Has been up and about the house; while walking the body is inclined to the right side; in

the recumbent position the limbs are always flexed.

February 5, 1 P.M. All previous symptoms very much aggravated, and vomiting freely. Gave morph. sulph., gr. $\frac{1}{4}$, hypodermatically. At 5 P.M. I was asked to see her in consultation with Dr. Clark. She was suffering intense pain, extending over the entire abdomen; abdomen very much distended and tender to touch; features pinched; expression anxious; great difficulty in breathing; hands and limbs cold and clammy; face and lips bloodless; pulse 128, and very weak; temperature 102°, and presenting all the symptoms of an internal hæmorrhage. Examination per vaginam. A large, sensitive, pulsating mass in the right broad ligament; uterus enlarged and crowded to the left, and a slight, black, bloody, vaginal discharge. The doctor's diagnosis of a ruptured extra-uterine pregnancy was confirmed. An immediate section was advised, and strongly urged, but the patient flatly refused, saying she would die before she would ever consent to an operation. I informed her that there would be a time, very soon, when she would ask for an operation, when, possibly, it would be too late.

February 12. There has been a gradual improvement in the symptoms, although the pulse and temperature have remained abnormally high.

February 14. Still improving and sitting up.

February 17. About the house, upstairs and down, and out in front yard.

February 18. Considerable bearing-down pain; quite regular and resembling labor pains; slight vaginal discharge.

February 19. Same as the day before. Abdomen more tympanitic

and tender; mass much larger and more sensitive.

February 20. No change except discharge from vagina increased.

February 21, 9 A.M. Patient says she is better. Examination does not confirm her statement. Tympanites increased, and she cannot tolerate even the slightest percussion of abdomen; pulse 120, temperature 102°. The doctor urgently requested that I should be called, to which the patient would not consent.

5 P.M. Rapidly growing worse.

7 P.M. The husband telephoned me his wife was dying, and asked me to see her with Dr. Clark.

At 7.30 P.M., my second visit, she presented all the characteristic symptoms of collapse due to internal hæmorrhage; respiration sighing; the entire surface of the body bathed in a cold, clammy perspiration; pulse 134, weak and thready, etc. We at once gave her hypodermics of strychnia, digitalis and ergotine, and advised an immediate operation as the only chance to save her life. With death rapidly approaching, she consented. She was at once removed to the city hospital (one block from her residence), and preparations made for an operation.

At 9 P.M. In almost a complete collapse; pulse 150, and scarcely perceptible, ether was administered, and assisted by Drs. Clark and Zimmerman, and in the presence of Drs. A. M. Clark, Booth, Welsh and Montgomery, I opened the abdomen and rapidly shelled out, ligated and cut away the adherent right tube and ovary. The left tube and ovary being diseased were quickly removed. The abdominal cavity contained about a quart of fluid and clotted blood, and was removed by a thorough irrigation with hot distilled water. A two

months' foetus was washed out during the irrigation. There still being considerable hæmorrhage from the adhesions, I packed the right pelvis with iodoform gauze and closed the incision with silkworm-gut.

9.30 P.M. Operation completed and patient in bed; pulse 160, very weak and thready; external heat applied and stimulants freely given hypodermatically and by enema.

February 22, 9 A.M. Pulse 160; temperature 101 $\frac{2}{3}$ °; at times no pulse can be discovered. Strychnia, $\frac{1}{25}$, and nitroglycerine, $\frac{1}{100}$, have been given hypodermatically every hour since 7.30 P.M.

3 P.M. Sinking spell, gave 10 drops tincture digitalis hypodermatically every hour, injected saline solution in the cellular tissue of thigh and continued previous treatment.

February 23, 9 A.M. Reacting nicely, circulation stronger; pulse 130; temperature 100 $\frac{2}{3}$ °. Removed gauze packing. There being considerable oozing of bright red blood, a drainage tube was inserted and cleaned every twenty minutes.

8 P.M. Pulse 120, temperature 100°, patient doing nicely.

February 24, 9 A.M. Pulse 108, temperature 100°. Removed drainage tube. Bowels freely moved by enema of a saturated solution of Rochelle salts.

March 1. Temperature has ranged from 99° to 100°, pulse from 95 to 105, improving rapidly.

March 12. My patient made a good recovery and left the hospital March 29, five weeks after the operation.

On account of the gauze packing, the lower angle of the incision healed by granulation. During the operation, and for thirty-six hours after, hypodermics of strychnia, gr. $\frac{1}{25}$, and nitroglycerine, gr. $\frac{1}{100}$, were given every hour.

The photographs are a splendid illustration of the sac and foetus.

CASE V.—Mrs. G. W., aged 32 years. General health good. Fourteen years married. Two children. No miscarriage; last pregnancy, 1882. Age at first menstruation, 12 years. Menses always regular and free from pain. I would also add that she was reared in luxury, and, perhaps, in this way differed from my other cases. Last regular menstrual flow, January 15, 1892; very slight show February 20.

February 20. Symptoms of pregnancy now developed. During the morning of March 2 she was apparently in good health. At 5 P.M., upon arising from her bed she was suddenly seized with severe colicky pains in the left iliac region, accompanied by more or less nausea. 6 P.M. While serving dinner she fainted. She was assisted to her bed, and a physician sent for. Upon his arrival, at 7.30, she informed him that she had had frequent attacks of a similar nature; that it was simply neuralgia of the bowels, and that she would be better in the morning. Her statement was corroborated by her husband. Hot applications were ordered, and anodynes given. 11 P.M. The physician's second visit; pains not relieved. 5.30 A.M. The patient growing rapidly worse, the physician was again summoned. A ruptured tubal pregnancy was now suspected, and I was asked to see her in consultation.

March 3, 7 A.M. I found Mrs. W. in bed, with both knees flexed, and suffering severe pain over the entire abdomen, especially severe in the left iliac region. Abdomen tympanitic, and very tender to touch. Pulse 128, very weak and thready; temperature, 100°; face and lips bloodless; features

pinched; expression anxious; sighing respiration; surface of the body cold and clammy, and presenting all the symptoms of collapse due to internal hæmorrhage.

Vaginal examination revealed an extremely tender, boggy mass in region of the left ovary and tube, so tender that a thorough examination could not be made. A diagnosis of ruptured tubal pregnancy was made, and its immediate removal advised. Upon being informed of our opinion, she requested her husband to send for Drs. Cushing and Allen, of Cleveland (the former having been her family physician). Gave strychnine, digitalis and ergotine every half-hour hypodermatically.

7.45 A.M. Upon being informed that she could not survive until her physicians arrived, she requested us to operate as soon as possible.

9 A.M. Sixteen hours after the first rupture, with the abdomen much more distended, pulse 140, and the patient in collapse, assisted by Drs. Zimmerman, Welsh and Booth, I cut down and rapidly ligated and cut away the ruptured left tube and ovary (see photograph of specimen). The abdominal cavity contained from two and one-half to three quarts of loose and clotted blood. The cavity was thoroughly irrigated, a drainage tube placed in position and the incision closed with silkworm-gut.

Notwithstanding the frequent use of large doses of strychnia, digitalis and whiskey, together with saline solution (hypodermatically) during the operation, my patient died on the table. Ether was badly taken, and I realized the gravity of the case before the operation, but felt that it was my duty to give her the slight but only chance offered by abdominal section.

The Effect of Castration on Woman, and Other Problems in Gynæcology.¹

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THERE are problems in gynæcology not yet fully solved, on which I purpose in this paper to give my own individual opinion—an opinion that I do not claim to be infallible, but which is based upon a large experience.

One question not yet satisfactorily answered is this: What effect upon a woman has the removal of her ovaries? Unquestionably there usually follow the annoyances of the change of life. These, in my experience, are long spun out, because, when menstruation has been abruptly and artificially stopped, the change of life, especially in young women, takes more time to become fully established than when the menopause has been naturally induced. Consequently, years may elapse before the victim of the operation escapes from the perspirations, the flashes of heat, the skin-tinglings, the numbness of the extremities, the nerve-storms, and all other vaso-motor disturbances, the name of which is legion. My experience, therefore, coincides with that of Hegar, who says that “the artificial menopause induced by the operation is often attended with more serious complications than those which are not rarely observed in the natural change of life.”²

Then, again, the unwelcome fact cannot be shirked, that mental disturbances may be traced directly to the removal of the ovaries as a cause. These are manifested by an averseness to going into society, by brooding, by low spirits, by melancholy and even by insanity. Every ovariectomist has met with such painful episodes in his practice. Glavaecke, who has made a study of this subject, goes so far as to declare that “in almost all cases the mind becomes more or less affected, and not infrequently melancholia results.”¹ Keith has stated that 10 per cent. of his patients who recover from hysterectomy subsequently suffer from melancholia or from other forms of mental disease.² Yet this result must come, not so much from the extirpation of the womb, which is merely a muscular bag, as from the associated ablation of the ovaries, of which the womb, physiologically, is only the appendage.

Whether this deplorable event is due directly to the nerve-shock of the operation itself, together with its emotional environment; whether to the abrupt arrest of an habitual flow, or whether to the absolute need of the ovaries for mental equilibration, is yet an open question. We know,

¹ Read before the Obstetrical Society of Philadelphia, December 7, 1893.

² British Medical Journal, December, 1886, p. 1280.

¹ New York Medical Journal, July 20, p. 73.

² Ibid., p. 73.

however, that sexuality is a potent factor in woman as well as in man, and that even certain sexual functions—such as coition, menstruation, gestation, parturition and lactation—of themselves tend not infrequently to disturb the mental poise. I am disposed, however, in a measure to attribute the attacks of insanity in those women who have lost their ovaries, to their brooding over the thought that they are unsexed; and if brooding and dejection may be deemed in themselves mental aberrations, Glavaecke's sweeping statement is not an extravagant one.

But, after all, the burning question is: Does the removal of the uterine appendages affect the sexual sense of the woman, or in any way unsex her? Here we have an embarrassing diversity of opinion. Some operators contend that in these respects castration does not affect her at all; others that it does so, and often very decidedly. The truth in such cases usually lies in the mean, as I shall try to show.

In my "Lessons in Gynæcology" and in my early teachings I maintained that the removal after puberty of the ovaries and the tubes does not unsex the woman—at least not to a greater extent than castration after puberty unsexes the man. In the one the ability to inseminate is lost; in the other the capability of being inseminated; but in both the sexual feelings remain pretty much the same. Males who have lost their testes after the age of puberty are said to retain the power of erection, and even of ejaculation, the fluid being, of course, merely a lubricating one. The amorous proclivities of the younger steers are the scandal of

our highways. Alive to these facts, Oriental jealousy demands in a eunuch the complete ablation of the genital organs. Not only are the testes, therefore, removed, but also the scrotum and the penis flush with the pubes.¹ Hence, to avoid the soiling of his clothes, every eunuch carries in his pocket a short silver tube, which he inserts merely in the pubic meatus whenever he passes his water. I contended, further, that, apart from cessation of menstruation and from inevitable sterility, the woman after castration remains unchanged, having the same natural instincts and affections; that the sexual organs continue excitable, and that she is just as womanly and as womanish as ever. I held that the seat of sexuality in woman had long been sought for, but in vain. The clitoris had been amputated, the nymphæ had been excised and the ovaries and tubes extirpated; yet the sexual desire had survived these mutilations. The seat had not been found, because sexuality is not a member or an organ, but a sense—a sense dependent on the sexual apparatus, not for its being, but merely for its fruition. My inference was that the physical and psychical influence of the ovaries upon woman had been greatly overrated. In the popular mind a woman without ovaries is not a woman. Even Virchow contends that "on these two organs (the ovaries) depend all the specific properties of her body and her mind, all her nutrition and her nervous sensi-

¹ North American Medico-Chirurgical Review, May, 1861, p. 500; New York Medical Record, June, 1870, p. 190; Medical and Surgical Reporter, April 24, 1875, p. 329; Universal Medical Journal, November, 1893, p. 329.

bility, the delicacy and roundness of her figure, and, in fact, all other womanly characteristics." This statement I held to be true only so far as the ovaries are needful for the primary, or rudimental, development of woman, but not true when once she is developed; for then they are not essential to her perpetuation as woman.

In time, however, I slowly found out that the removal of the ovaries does blunt and often does extinguish ultimately the sexual feeling in woman; although the removal of the testes after puberty is said not to impair the virile sense of the male. This random opinion, however, I very much doubt, despite the maudlin sentiment expressed even about eunuchs by De Amicis and by other travellers in the Orient. For the secretion of the seminal fluid is in itself the great aphrodisiac, and how otherwise can we explain the changed behavior of Abelard toward Heloïse after his forcible castration? Giving up this analogy, therefore, in my more recent teachings I adopted that of the menopause as suggested by Kœberlé. I accepted his analogy, although I could not wholly accept his inference that woman is not affected sexually by the natural cessation of her menses. Kœberlé sums up his opinion in the following words: "In my own experience the extirpation of both ovaries causes no marked change in the general condition of those who have been operated on. They are women who may be considered as having abruptly reached the climacteric. Their instincts and affections remain the same, their sexual organs continue excitable and their breasts do not wither up."¹

A riper experience, of which time was the main element, has led me still further to modify my views on this subject.

Unquestionably the natural change of life when fully established, but not until it is fully established, does very sensibly dull and deaden the sexual sense of woman, which ultimately disappears in her long before virility is effaced in man. Nor is the survival of this sense after the menopause so essential to woman, because after the cessation of menstruation she loses the power of procreation, which is retained to an advanced age by man. This is a wise provision of Nature, for, did the sexual sense of the wife outlast that of the husband, it could not be gratified. Sensible of these changes, a gifted French authoress makes one of her heroines say, with italicized emphasis: "*Men* may forget the course of years; they may love and become parents at a more advanced period than we can, for Nature prescribes a term after which there seems to be something monstrous and impious in the idea of (our) seeking to awaken love. . . . Yes; age closes our mission *as women* and deprives us of our sex." Now what happens in the natural menopause holds good in that artificially and abruptly produced, with this important difference, that in the latter the sexual feeling is sooner lost. I am willing to concede that in some women, by no means in all, whose health had been so crippled by diseased appendages as to extinguish all sexual feeling, there is, after castration, a partial recovery of the lost sense whenever health has been regained. Yet even in these cases, as far as I can ascertain—for women are loath to talk about these matters—

¹ Nouveau Dictionnaire de Médecine et de Chirurgie, tome XXV, p. 487.

the flame merely flares up, flickers, and soon goes out.

My own experience would lead me to the conclusion, that in the majority of women who have been castrated, the sexual impulse soon abates in intensity, much sooner than after a natural menopause, and that in many cases it wholly disappears. This tallies with Glavaecke's conclusion that "in most of the cases the sexual desire is notably diminished, and in many cases is extinguished." In corroboration of this statement let me cite, out of my many cases in point, a few of the more salient ones. The wife, aged 34, of a farmer, so exhausted him by her sexual exactions that his health suffered very seriously. The appendages were diseased and fixed by adhesions. After their removal, menstruation and the sexual impulse continued unabated for a little over a year, when the former wholly ceased, and the latter not long after disappeared. Another case was the very ardent wife, aged 30, of a man who was not so well-mated to her. She was sterile and had excessive menorrhagia from a uterine fibroid, for which her ovaries were removed. Menstruation did not reappear, and in less than two years all sexual feeling was lost. In a third case, a young lady of high intelligence was reduced to a pitiable condition of ill health by menorrhagia and by frequent acts of self-abuse. She was not insane, yet, incredible as it may seem, she often masturbated no fewer than eight times in the four-and-twenty hours. For several months after the removal of the ovaries, which were apparently healthy in every respect, she kept up her bad habits, although the monthly flow never returned. Then the sexual

feeling gradually vanished, and she gave up her solitary vice. In a fourth case I removed the healthy ovaries of an unmarried lady of middle age who was queer, but not insane enough to be confined. Toward her monthly period she was goaded by so irresistible a desire for sexual intercourse that she herself feared her going astray. Not long after her castration, which was done more to save her from reproach than to cure her insanity, she lost the desire wholly and absolutely. She did not, however, regain her reason, and ultimately had to be placed in an insane asylum.

Imlach's case is a celebrated one in medico-legal jurisprudence. This skilful surgeon, after removing the appendages of a woman, was prosecuted by her for unsexing her, and by her husband for spoiling thereby his marital pleasures. The special committee appointed to investigate Imlach's numerous cases of castration at the Woman's Hospital, Liverpool, reported that they found "a distinct loss of sexual feeling to such an extent as to cause serious domestic unhappiness in not a few instances." The correctness of this report is corroborated from cases in my own practice, of engagements broken off, of conjugal estrangements, and of marital infidelity.

Let me here remark, that I was once consulted by the late Dr. Kerlin about the propriety of removing the ovaries from a feeble-minded inmate of his institution, whose shameless intercourse with the other sex was the only bar to her being at large. Being very sanguine that the operation would succeed in its object, I urged its performance. He, however, could not get the official sanction which we

both wished for our legal protection, and nothing further was done than to keep the girl under lock and key.

In other sexual characteristics I have not found in these women any marked changes, either physical or psychical. Their affections seem to remain the same; their breasts do not flatten or wither up; they do not become obese; abnormal growths of hair do not appear on the face or on the body, and the tone of their voice and its quality is not changed. In other words, there has not been in a single one of my cases a tendency toward any characteristic of the male type. If any change has taken place, it has been in the direction of old-maidhood.

In close relation with this subject four questions come to the fore, and grave ones they are:

(a) Do chronic diseases of the appendages often lead to a fatal issue?

(b) To restore health to the woman suffering from such diseases of the appendages, is it needful invariably to invoke the aid of surgery?

(c) After an abdominal section has been made, and after adhesions have been broken, must the now free appendages always be removed?

(d) Is castration of the female a warrantable operation for the cure of insanity or of epilepsy?

To the first question I answer that the death-rate from chronic diseases of the appendages is greatly overrated, so much so that, in my opinion, more deaths result from the operation of removing the tubes and ovaries, in the hands of even the most successful gynecologist, than from the disease itself. Knowsley Thornton states that "in his own experience pyosalpinx is not necessarily a fatal disease."

In my experience, after the patient has safely passed through the acute stage of the inflammatory attack, her life is in very little danger. Chronic diseases of the appendages usually affect the well-being of the woman, but they ordinarily do not threaten her life in any other way than by the wear and tear of prolonged discomfort. This may shorten her days, but fatal attacks of peritonitis, even in so-called leaky pus-tubes—if such ever exist—are the exception. Paradoxical as it may seem, the life of a woman with but one damaged appendage is in greater danger than the life of a woman with both of her appendages diseased. The explanation is a simple one: Parturition very generally relights a chronic inflammation of the pelvic organs, but when both appendages are diseased pregnancy rarely takes place.

To cure the ill-health of a woman whose appendages are diseased, or to relieve her from her sufferings, a surgical operation is by no means always necessary. Many women with adherent tubes and ovaries, and, for the matter of that, some even with pus in these organs, suffer either no inconvenience whatever, or very little indeed from that condition *per se*. There are, again, others who have pain or aches only at their monthly periods. But let their health break down, say from influenza, from malaria, from overwork, or from nerve-strain, then symptoms may arise from hitherto latent pelvic lesions. Yet, in most of these cases, if the woman can be restored to her former condition of health—that is to say, to that which she enjoyed just before the final break-down—she will lose her local symptoms and become sympto-

matically well. On this matter I can speak positively, for many a patient has been sent to my private hospital in order to have her distinctly diseased tubes and ovaries removed, who has been restored to health without the use of the knife. Now, by the term *restored to health*, I do not mean that the treatment has released the adherent appendages, but that it has freed the woman from every pain and restored her fully to all her social and domestic duties and pleasures. She has been cured so well as to be able to row, to swim, to dance, to take long walks, to ride on horseback, and to exercise in the gymnasium—and what better vouchers of good health than these can be given?

I will go yet further and assert that even cases with all the subjective and all the objective symptoms of ovarian or of tubal abscess have been cured by me without any operation whatever—the pus having disappeared either through absorption or through inspissation. What is still more strange, in a few cases of abscess of each uterine appendage—very few, I will acknowledge—the treatment by massage, electricity, local applications, and by a general building up of the system was followed by conception, pregnancy and parturition. These were cases in which I did not advocate castration until other means had been tried first, but all had been sent to me by their physicians for the purpose of having their ovaries removed.

I come now to two cases on which I unwisely urged castration. Perhaps I have had more, but I cannot recall them. Each one had the fixed, sausage-like, tubal tumor on either side. Yet each patient, to my very great surprise, conceived and bore

children. The one, a patient of my friend Dr. D. Murray Cheston, first consulted me and afterward a gynecologist of world-wide renown, who corroborated my diagnosis of double pus-tubes, and doomed her, as I had, to hopeless sterility. The puerperal convalescence was stormy and at one time threatening; but she ultimately got well. The other case is a standing joke of my friend Professor Parvin, who knew the circumstances. The lady presented similar characteristics to those of the preceding case, and I urged an operation. This she luckily refused to undergo, and a year or more afterward gave birth to twins. Of course, the rejoinder will be made, that my diagnosis, although shared by other specialists besides myself, was a faulty one. But I can as unhesitatingly reply, that had the objector made the examination, he inevitably would have followed it by an abdominal section, and as inevitably would have removed both appendages, as I certainly should have done had I opened the abdomen.

Now, in these cases, the pus was either confined to the ovaries, or, as I supposed from the sausage-like form of the tumors, it lay sealed up in the tubes, and the closed-up lumen of one of them was, by returning health, restored to full patency. The possibility of a closed-up tube regaining its bore is, I know, strongly disputed, even ridiculed, and *a priori* reasoning would certainly justify the doubt. If, however, solid uterine fibroids of stony hardness and of several pounds weight will, through absorption, wholly disappear, as every gynecologist has seen them disappear, why may not the tubal barriers and septa also break down and melt away? I

have read somewhere, but the reference I cannot now find, that, in order to prevent conception in a case of narrow pelvis, both tubes were ligated, without establishing sterility. On the other hand, great disorganization of the ovaries is not incompatible with pregnancy, for it appears that a very small amount of ovarian stroma goes a great way. Menstruation often continues, however diseased the ovaries may be, and Atlee reports two cases in which one ovary having been removed, the other became so cystic as to need *repeatedappings*. Yet each woman not only menstruated, but conceived and gave birth to a child.¹ In one of these cases, a cyst of the sole ovary, the other having been removed many years previously, was tapped twice before conception, twice before delivery, seven times afterwards and then was extirpated. Robertson² mentions a remarkable case in point, which occurred in his practice. He removed both the ovaries, which were diseased, of one of his patients, yet she afterward conceived and gave birth to a child. His explanation is that he must have left, unwittingly, a scrap of healthy ovarian tissue in one of the stumps. But on the other hand, the ovum could not have descended into the womb, unless the lumen of one tube had reopened at the point where it had been sealed up by the adhesive inflammation set up by the ligature.

With regard to the third problem: Supposing simply therapeutic measures fail, and the physician is driven to surgical interference, must he, after breaking up the adhesions, always ex-

tirpate the now free uterine appendages? Most surgeons contend not only that the diseased appendages should be removed, but also that both appendages should be extirpated, even if one alone is diseased. This advice is given on the ground that the healthy one is liable in its turn to become affected. My own course, under such circumstances, would be, never to remove the healthy appendage, unless the menopause had been established already, or unless there obtained a good reason for hastening it on. On the other hand, should both ovaries be intrinsically diseased, and their tubes contain pus, I would always remove both uterine appendages in their totality, no matter what the age of the patient might be. Generally, however, the pus is limited to the tubes, and in that case sometimes one ovary, barring its adhesions, which, of course, must be broken, is healthy enough to be left behind. In such a case the tube alone, if possible, should be removed, and not the healthy ovary or the healthy ovaries—if both happen to be sound. Further, rather than wholly remove all ovarian stroma, I should try in such cases to leave behind even a small fragment. For, in several of my cases in which a piece of an ovary, not larger than a bean, was left behind, not any menstrual or sexual changes whatever took place in the woman. Should the uterine appendages be merely adherent, and not intrinsically diseased to any extent, I would, as a rule, during active menstrual life, release them, and, perhaps, extirpate the worse of the two, but not both of them.

My reasons for this conservative treatment are, that the complete extirpation of these organs, as I have

¹ Atlee: Ovarian Tumors, pp. 38 and 39.

² British Medical Journal, September 27, 1890, p. 722.

shown before, tends to destroy the sexual feeling, to disturb the mental equilibrium, and to produce prolonged nervous perturbations, all of which come from the abrupt and untimely suspension of menstruation. There is yet another very excellent reason for this advice: The majority of physicians, and all laymen, look upon women deprived of their ovaries as unsexed. Just as castration is in the male, so the analogous operation is in the female deemed a sexual mutilation to which common consent attaches a stigma. No woman would marry a eunuch, and few men would wed a woman deprived of her ovaries. In my own practice I have known of several very sad cases of marriage engagements broken off, of marital infidelities, and of bitter estrangement between husband and wife, all of which would have been avoided had one ovary been spared, or, indeed, had a mere fragment of one been left behind.

Upon the removal of the uterine

appendages for the cure of insanity and epilepsy, I have very few words to say, but they are all based upon cases occurring in my own practice. If the insanity is limited to periodic outbreaks, strictly ovarian in their character, and with the menstrual flux as a storm-centre; if the epileptic fits are preceded by an ovarian aura—that is to say, if they pivot around the monthly period, and appear at no other time—the removal of the appendages, by suppressing a pernicious menstruation, usually will bring about a cure in either disease. But when these organs are extirpated merely as a panacea *per se* for these mental and neural disorders, irrespective of an ovarian origin, the operation affords no relief. At the same time I am free to confess that, in order to stamp out insanity, I am strongly inclined to advocate the legal castration of every man and of every woman who is the unfortunate victim of this hereditary curse.

Specimen Tubal Pregnancy, Three Months.¹

BY L. J. HAMMOND, M.D.,

PHILADELPHIA.

MR. PRESIDENT:—The specimen I here show you is a three months' tubal pregnancy removed to-day from a patient of Dr. Jump. She is a mulatto 40 years of age, in every way well developed. This was her sixth pregnancy. The two previous to this

were miscarriages. Ever since the last miscarriage, fourteen months ago, she has suffered with pelvic pains on right side, and about eight months ago consulted Dr. Goodell by the advice of her physician, who considered her condition one of ovaritis and advised operation. When she became pregnant the pains did not

¹ Read before the Obstetrical Society of Philadelphia, December 7, 1893.

seem to have increased until last Friday, when she was obliged to go to bed with severe pain in the back. The same night a slight bloody discharge from vagina alarmed her, and on Saturday her physician was called in. At this time her condition, the doctor tells me, did not seem alarming, and free depletion relieved her somewhat. On Monday she again suffered another attack of severe pain, with rapid pulse, marked tenderness over the abdomen and free discharge from the vagina. Again she improved until Tuesday, when the intense pain, rapid pulse, 150, and slow respiration alarmed her attendant, and on Wednesday, when I saw her with him, she was in a condition of collapse. Yawning, bloodless condition of mucous membrane of eyelids and lips, marked distention of abdomen, and on vaginal examination a large bulging mass could be felt filling the pelvis on right side. Uterus pushed over to left, some bleeding from vagina and feeble rapid pulse. The diagnosis of ruptured tubal pregnancy was, of course,

easily made in this case. Immediate operation was advised.

Operation.—Abdomen full of blood which gushed from the small incision by the quart. A hurried search for the bleeding point was made and this large placental mass enclosing the fœtus, which can be seen through its unbroken membrane, was found high up on the right side. In other words, it was floating in blood. There were no adhesions except some placental attachments to the side of uterus, which were very annoying from their oozing. So great was the bleeding from this source that I was obliged to reopen the incision a few moments later, when I succeeded in controlling it with pressure and hot water. The rupture evidently occurred on Monday, and the slowness of the hæmorrhage may have been due to the position of the rupture, which, as you see by the specimen, is posteriorly, as the perforation in this position would be most likely clogged by its contact with the pelvic structures.

Surgical Shock.¹

BY CHARLES P. NOBLE, M.D.,

PHILADELPHIA,

Surgeon-in-Chief of the Kensington Hospital for Women.

It is proposed in this communication to briefly consider the nature of surgical shock, and then to take up its treatment in detail. Shock is a condition of the body which is character-

ized by feebleness and rapidity of action of the heart, by the shallowness and frequency of respiration, by the lowering of the temperature of the body, and by the lessened activity of most of its functions. Intellection, digestion, and the secretion of urine

¹ Read before the Obstetrical Society of Philadelphia, December 7, 1893.

all are more or less in abeyance. It is probable, also, that the processes of assimilation and metabolism are profoundly interfered with. Perspiration is usually free, the body being covered with a cold, clammy sweat. This, however, is due not to the increased activity of the sweat glands, but rather to an arrest of the activity of their cells, so that they simply act as strainers for the watery part of the blood to pass through them.

There can be no question that vitality is at a low ebb when shock exists, but there is some difference of opinion as to the real physiology or pathology involved. It is generally accepted that shock is a manifestation of paresis of the nervous system, its symptoms being due to lessened and irregular innervation. The question as to whether the cerebro-spinal or the sympathetic system is most involved is in dispute, and we do not propose at this time to attempt the elucidation of the question. As a matter of fact, injury of the body in any of its parts can bring about shock. Injuries to certain parts of the body are especially liable to produce shock. These parts are the testicle and urethra, in the male, the ovary (in a lessened degree) in the female, and the abdominal viscera. Examples of shock from injury to these structures are common, and familiar to every one of experience. The familiar experiment of temporarily arresting the heart's action of the frog by a blow upon the abdomen is a striking illustration. Leaving aside the disputed points at issue, we wish to consider certain facts because of their very practical bearing upon the therapeutics of surgical shock. Among the most important symptoms of shock is

the lessened force and greater frequency of the heart's beat. The activity of the respiratory centre, also, is much lessened. The superficial blood-vessels are contracted, so that the surface of the body is pale and even blanched. The temperature of the body is lowered below the normal. These facts are indisputable, and a recognition of the existence of these conditions forms the basis for rational therapeutics. Heat must be restored to the body; the heart and respiratory centres must be stimulated to do their work; and the superficial blood-vessels must be dilated, so that the circulation may be equalized by affording a channel for the blood which has been retained in the great veins of the abdomen. The practice which I have followed for some years to accomplish these results will now be given.

Treatment of Shock.—The most important point in the treatment of shock is its prevention. Much can be done by prudent management, either to avoid shock or to lessen its degree. In selecting the date for operation, a time should be chosen when the patient is in good condition. Almost always this is possible. It is only in emergency cases, and in patients who are suffering from a disease whose progress is steadily and rapidly downward, that preparatory treatment will not put them in better condition. All patients requiring operation should receive careful study, and every therapeutic indication should be met before operation. Especially should the condition of the emunctories be looked after. The bowels, skin and kidneys should be put in good condition by the use of baths, purgatives (especially broken doses

of calomel and salines), and the abundant ingestion of water. The *morale* of the patient should not be neglected, as much can be done, by stimulating the courage of the timid and allaying the fears of the despondent, to make the patient look forward to the operation with courage and without dread. All these matters should be attended to prior to the day of operation. The temperature of the room in which the operation is done should be high, from 75° to 85° F. In such a room the loss of heat from the patient by radiation is much less than when the operation is done in a cool room. Loss of heat from the patient can be lessened also by the manner in which she is dressed. It is best that she be well wrapped in blankets, and that as little of the skin surface be exposed to the air as the necessities of the particular operation permit. For the same reason the use of wet towels or gauze about the patient is to be deprecated. Evaporation from such wet materials chills the patient. Much can be done also by the proper administration of the anæsthetic. Patients should not be drowned in ether. Enough only should be given to maintain anæsthesia, unless to meet a certain indication, absolute relaxation is required. The prevention of hæmorrhage, and the avoidance of rough handling of the patient, especially of the abdominal viscera, are matters of the greatest importance in preventing shock. The careful surgeon gives due attention to each and all of these matters of detail, and no one so much appreciates their importance as he who has to deal constantly with grave operations. This applies especially to the abdominal surgeon, because, in many cases, when he begins an opera-

tion the life of the patient depends upon its completion. He cannot do a part of it and postpone the rest to another day. In many of the long, tedious operations which he is called upon to do, involving multiple visceral adhesions, the very life of the patient itself depends upon attention to every detail to prevent shock, so that he may have time to complete the operation *secundum artem*.

The active treatment of shock consists in supplying heat to the body which has been lost, in stimulating the heart to better work, in counteracting nervous depression and in overcoming irregular action, especially on the part of the vaso-motor nervous system, until reaction shall occur and the vitality of the patient can be sustained by alimentation. In describing the treatment of shock I shall simply give an account of my own practice in the treatment of this condition.

If during the operation the patient begins to suffer from shock and there is reason to expect that this will increase, especially when the operation is not yet completed, I begin at once actively to treat it. One-fifteenth of a grain of sulphate of strychnia and one-fiftieth of digitalin is given hypodermically, and the dose of strychnia is repeated every fifteen minutes until some improvement is manifested in the pulse, until a fifth of a grain is given. If improvement does not manifest itself promptly, and especially if shock be profound or if the patient has been markedly prostrated before the operation, a hundredth of a grain of atropia sulphate and two or three minims of a 1 per cent. aqueous solution of nitroglycerine are given hypodermically. In still other cases from three to six grains of

citrate of caffein are administered in addition. During this time hot-water bottles have been put about the patient, and if the operation is an abdominal section, at times warm water is poured into the peritoneal cavity. I have also employed hot beef-tea enemas, but, as a rule, an enema is not given, because it interferes with the completion of the operation, which is just as important as any one detail in the treatment of shock, if not more so. In fact, it is of the highest importance to complete the operation as rapidly as is consistent with safe work. The same is true of the after-dressing of the patient, who should be put to bed as promptly as is feasible.

The bed should have been warmed by having hot-water bottles in it while the operation was in progress, and in all cases in which shock is a marked feature, the sheets should be removed and the patient placed between warm, dry blankets. At this stage the use of whiskey by enema is of service, and at times it is proper to use whiskey during the operation, especially if shock is not another name for too much ether. The use of whiskey or alcohol in any shape is not good treatment for an overdose of ether. The best way to employ whiskey, as a rule, is to give it by enema with hot beef-tea, about two ounces of whiskey and six ounces of beef-tea. Dry friction with the hand or with a dry cloth, especially to the extremities if they are covered with clammy perspiration, will do much to bring about reaction, and also will lessen radiation from the surface by preventing evaporation of the perspiration. Morphia in small doses, one-eighth of a grain or less, is also

useful as a heart stimulant and as an anodyne, if, when the patient becomes conscious, there is marked pain. The morphia not only acts as a stimulant itself, but prevents depression which would result from severe suffering. So much for the immediate treatment of shock. Under ordinary circumstances, when the shock is marked and yet not so profound as to be alarming, within half an hour strychnia can be pushed to a fifth of a grain, atropia to a fiftieth, caffein to five grains or more, and digitalin to a twenty-fifth of a grain, or what is really better, tincture of digitalis to half a drachm, with the fiftieth of a grain of nitroglycerine.

If the crisis passes and yet the patient remains in a markedly depressed state, the question of treatment for the ensuing twenty-four or forty-eight hours comes up. The use of external heat should be continued until the temperature of the body becomes normal, and even longer should the patient complain of chilliness. But the sheet-anchors of safety are strychnia, digitalis and whiskey. In a marked case it is my habit to give the following order: To give hypodermically sulphate of strychnia, one-thirtieth of a grain one hour; tincture of digitalis, fifteen drops, with the one-fiftieth of a grain of nitroglycerine, the next hour; three grains of citrate of caffein the third hour; and an enema of whiskey, two ounces, and beef-tea, six ounces, the fourth hour. This order I have had carried out many times for twenty-four, forty-eight and even seventy-two hours. In the worst of cases, for its temporary effect, cocaine has been employed in addition to the above, also small doses of morphia if much

pain and especially if great restlessness were present. It is my experience that most patients will take a fifth of a grain of strychnia in twenty-four hours without manifesting symptoms of strychnism. I have not employed the heroic doses of strychnia described by some writers, such as half a grain within two hours, but in a desperate case, watching it carefully, I should not hesitate to give repeated doses of one-fifteenth of a grain every half-hour for a short time until some symptoms of irritation appeared. We certainly have no more reliable exciter of the nervous and muscular systems than strychnia, nor any drug which is more capable of maintaining its effect.

Digitalis is also a very reliable drug in the treatment of shock. It is capable of whipping up the heart to increased work, especially for a few days and until a sustained effect can be secured by alimentation. This is exactly what is required in the treatment of shock. Digitalis has, however, one effect which is undesirable. It causes a contraction of the arterioles, and thus increases arterial pressure, so that, while it whips up the heart to do increased work, it also hinders the heart through the increase in arterial pressure; hence, it is wise, in the treatment of shock, to combine digitalis with nitroglycerine, which overcomes this bad effect of digitalis. The combination is much more effective than either drug alone. Caffein is a pure heart stimulant, and can be administered freely without evil consequences. Alcohol used judiciously and in not too large quantities, is one of our most important remedies. In shock following abdominal operations, it is best administered by enema combined

with beef-tea, which is itself a stimulant. Later in the case champagne by the mouth is often of service, but it fills only a partial indication and is not to be compared in value with whiskey when this can be ingested and retained.

The management of the diet in the treatment of shock is also important. Immediately after an operation accompanied by much shock, the stomach, as a rule, is not retentive; hence it is wise for a time in no case to administer much aliment of any description by mouth. Some hot black coffee or hot beef-tea is as much as should be given. When the stomach becomes retentive, light, easily assimilable food should be employed, as beef-tea, broth, milk (preferably peptonized), egg-nog, punch, etc. These foods should be administered in small quantities frequently repeated. The question of alimentation in the treatment of shock following abdominal operations offers certain peculiar difficulties. Under ordinary circumstances, when shock is not a special feature, it is the rule to administer no food to the patient, who has had a *cœliotomy*, for from thirty-six to forty-eight hours after the operation. Then broths or beef-tea from two drachms to one ounce, or two drachms of milk with one of lime water, are given every half-hour, and if retained the quantities are increased and the intervals lengthened, until about the fourth day after operation the patient is put upon liquid diet, the amount being regulated largely by the appetite. But in cases accompanied by marked shock, if the stomach proves retentive, it is wise to begin the administration of milk or beef-tea at the earliest feasible time, the quantity

being increased as rapidly as in the judgment of the surgeon the patient is able to digest and to assimilate. In some critical cases lives will be saved by judicious alimentation, which would be lost were the usual rules, applicable in abdominal surgery, followed.

It may be questioned whether the term shock should be applied to conditions which persist for one, two, three or more days. It is customary to consider that shock is of temporary duration, and that it ends either in the prompt death or in the recovery of the patient. But there are cases in which it is difficult to assign a name for the condition of patients, if it be not shock. I refer to those cases in which the patient exhibits marked shock after operation, and in which, although after a time the temperature of the body becomes normal and remains so, yet the patient's vitality remains at a very low ebb, the pulse continues rapid, small and feeble. The cutaneous circulation is not restored, the surface of the body being cool and pale; and where no other symptoms are present, except those of pronounced asthenia. This condition must be called shock, or else inanition or asthenia following shock. The condition persists until it is relieved by alimentation, as the nerve and heart stimulants, strychnia, digitalis and even whiskey, are not curative. I have had patients to die in this condition as long as a week

after operation, without having manifested other symptoms than those of pure asthenia, and in which the post-mortem examination showed no cause of death. On the other hand, I have seen patients recover from this condition, improvement becoming manifested upon the third, fourth or fifth day, when it had appeared that death was imminent from failure of the heart and respiratory centres. It is in such cases that judicious alimentation is of the highest importance.

In this class of cases the administration of oxygen gas by inhalation, is at times of service. All the vital functions are at such a low ebb, that any agent which is capable of improving the processes of metabolism is of value. My experience with the use of oxygen for this purpose is limited to one case, which was one of marked shock following an operation for double pus-tubes, in a woman reduced to the last extremity by hectic. She went to bed with a pulse of 180, with cool and blue skin, and every other evidence of the profoundest shock. The pulse did not fall below 145 for three days, near the close of which period there was every indication of early death from pure asthenia. The plan of treatment already detailed was followed out in her case, and in addition oxygen gas was administered during one day. It seemed to be of great benefit; at all events, she passed out of the shadow of death and made a good recovery.

Floating Kidney—Nephropexy.

BY W. J. HUNTER EMORY, M.D.,
TORONTO, CANADA.

I PRESENT a report of this case, partly because of the meagre treatment this class of cases receives in most of our general surgical text-books, and partly because the method of fixation adopted was new, to the operator at least, and was successful.

Miss J. D., aged 24, was admitted to Grace Hospital on the 3d of March, 1893, suffering from prostration, emaciation and severe attacks of abdominal pain. As she lay in bed in the dorsal position, mere inspection revealed the well-defined outlines of a tumor situated just above and to the left of the umbilicus.

Palpation and percussion easily showed this tumor to be the right kidney, which could be readily returned to its proper position, only, however, to wander away, as soon as position of body was changed, in whatever direction gravitation pointed, at times even presenting itself below the umbilicus, and to the left of the median line.

The extreme mobility and pains consequent upon the vagaries of this organ rendering the patient an invalid, she readily consented to an operation for its fixation. Accordingly, on April 15 the following operation was performed:

An oblique incision three inches in length was made in the loin, and the tissues divided down to the fatty capsule, which was surprisingly thin. On

dividing the fatty capsule, the kidney was seen moving up and down with each respiration, and the first attempt to grasp it with a pair of tenaculum forceps resulted in the disappearance of the organ among the abdominal viscera. A second attempt, however, proved more successful, and an incision was then made in the posterior surface of the body, an inch and a half in length, passing just through the fibrous capsule. A flap of the fibrous capsule, half an inch in width, was then reflected on each side, and sutured each to the corresponding flap in the transversalis fascia, thus holding the kidney firmly in its place. The external wound was then closed, by interrupted silkworm-gut sutures, two centre ones passing through a considerable portion of cortical substance, which lay exposed in bottom of incision. Dry antiseptic dressing completed the operation.

The shock was comparatively slight, and the patient made an uninterrupted and uneventful recovery, passing normal urine in normal quantities from the first. Sutures were removed on the sixth day. Union by first intention throughout. Temperature never rose to 100.°

Some months have now elapsed since the operation, and the kidney remains *in situ*, the patient wonderfully improved in general health, and doing general housework.

Is Operation Demanded in All Cases of Appendicitis? The Best Time to Operate.¹

BY A. MORGAN CARTLEDGE, M.D.

ABSTRACT.

INFLAMMATORY conditions of the appendix are essentially intra-peritoneal lesions. Modern surgeons have an abiding faith in the surgical maxim that whenever pus is believed to be present in tissues or organs of the body it should be removed; hence the new pathology of a very old and frequently fatal malady inspired surgeons to attempt some radical means of relief. In the enthusiasm which followed probably some lives were sacrificed that would have been prolonged, yet this feature is one that has occurred in the evolution of every great life-saving operation in surgery.

Perfection in technique can only come from individual experience and a knowledge of the work of others. The same principle applies to the numerous other requisites of success, such as diagnosis, advisability of operation, time of operation, etc. The diagnosis of appendicitis has been about as nearly perfected as that of most other surgical lesions; the question to be settled at this time is the prognosis and treatment.

The pathology of a disease is the only true keynote to its rational treatment. Probably the best classification of appendicitis is:

Catarrhal (simple).

Ulcerative (from tuberculosis, from foreign bodies).

Perforating (from ulcerative perforation, from strangulation, the result of twisting).

This classification deals strictly with the changes occurring in the appendix, and should be considered apart from the peritoneal and other conditions which may ensue and cause well-marked variations in the clinical course of the disease. If the walls of the appendix give way in a mass of fibrous adhesions, the result of long-continued irritation, the pus which forms is rather securely encapsulated, and may be days, weeks, even years finding an outlet. In fact, as is often the case, if the bacillus coli communis predominates and a few staphylococci are present, it may remain encapsulated unless it receives a new impetus of irritation. Cases were reported illustrating this point. Cases were also reported illustrating the part played by injury as an exciting cause in appendicitis, and the belief was expressed that a chronic form of unrecognized appendicitis existed prior to such injury.

We know more about the pathology of ulcerative or suppurative appendicitis than we do of the catarrhal form, because the cases not operated upon which recover are mostly called catarrhal. There are cases which progress with little pain, very little fever, 101° F. as a maximum, and have a tumor which subsides. These cases are the pride of the poultice and the opium practitioner. It is

¹ Read at the meeting of the Southern Surgical and Gynecological Society, at New Orleans, November, 1893.

thought impossible for catarrhal inflammation, which must of necessity be confined to the mucous coat of the appendix, to produce such peritoneal proliferations. If there is anything in reason, anything in the similarity of action of like tissues under the same conditions, then it is impossible. Nowhere in the body will catarrhal inflammation of the mucous membrane cause dense deposits in adjacent peritoneal structures. Then by catarrhal appendicitis we mean that possible variety that is found in autopsies after death from other causes, and also found by some surgeons after operating upon individuals with a pain in the right iliac fossa. Many cases of so-called catarrhal appendicitis operated upon by surgeons, if carefully examined, would reveal stenosis in some part of the lumen of the appendix, the distal part being filled with the unemptied secretion of the organ. Such an appendix, if there was great pain, probably would have ruptured before adhesions formed. The diagnoses in such cases, while fortunate for the patient, are more or less problematical. Ulcerative appendicitis must be either tuberculous or traumatic, the trauma consisting of foreign bodies and enteroliths, usually the latter. The tuberculous (probably more common than formerly supposed) would only give rise to acute symptoms as the result of cicatrization and stenosis, with distal distention or secondary inflammation with pus organisms, either of these results favoring perforation. This is essentially the chronic variety, but will eventually lead to perforation probably in the ways indicated.

Volvulus from rotation furnishes most of the furious cases of appendi-

citis; those that come without premonition. This condition properly should not be classed as appendicitis. The appendix giving way as the result of rapid necrosis from arrested blood supply and the general peritonitis which ensues being almost the first symptom observed. One such case was reported.

Prognosis.—While all the favorable statistics of appendicitis offered are accepted as true, they are favorable from one point of observation only; *i. e.*, as to the first attack, and then favorable only so far as the individual's life is concerned. When physicians come to view inflammations of the vermiform appendix in their proper light, the prognosis assumes a very different shade. We should consider any appendix once so affected as to deserve the name of appendicitis, whether from tubercle or trauma, a lastingly diseased structure, and the fancied cures are quiescent states, the result of very easily recognized conditions. Nature does wonders to bar the progress of this common malady, to render its results bearable by the adjacent structures, and at last to get rid of its evil consequences; yet this plain fact remains, that if there is no excuse for allowing removable tuberculous foci to remain elsewhere in the body, if it is considered good surgery to remove pus and pus-forming structures elsewhere, why is it good surgery to treat this disease by expectant methods? If we could trace our so-called first attack cases of appendicitis through subsequent ones, we would say the prognosis not only as to health and comfort, but as to life, is bad, very bad. A man has the trouble three, four or five times, appa-

rently recovers, all counted as cures, probably, by different physicians. Finally he dies in an attack; the death is counted but once, and sometimes not then; for if, as is often the case, death results from the rupture of an unrecognized appendicial abscess, or from diffuse peritonitis after perforation, the chances are that the cause is never suspected, and death is recorded as occurring from peritonitis. There are thousands of phy-

sicians who know how many patients they have had recover from appendicitis, but of this number few know the cause of the peritonitis that has carried away thousands of their patients.

Every case of appendicitis not barred by surgical limitation should be operated upon. The best time, provided the symptoms are not too urgent, is after the bowels have been thoroughly moved.

Ætiology of Dermoids of the Ovary and Testicle.

BY A. W. JOHNSTONE, M.D.,
CINCINNATI, O.

Mr. Chairman and Gentlemen:

In the closing sentence of the only paper on ovarian dermoids worth the reading that has ever been written, Bland Sutton, of London, says: "It is high time that some explanation should be offered to account for the origin of ovarian dermoids, which should be more satisfactory than such expressions as *fœtus in fœtu*, *pan genesis*, *parthenogenesis*, *excess of formative nisus*, *hyperechesis*, and other guesses equally vague and unsupported by facts." This explanation I am now ready to give you. It is that ovarian dermoids arise from the ova of the patient and not from any malformation of the epiblast from which she sprang. But, before I go into the proofs of the case, it would be well worth our while to devote a little time to the paper just referred to. Many of you have found and read it in the *British Gynecological*

Journal for August, 1888. This is the first systematic attempt to locate the part of the ovary from which dermoids spring. Its careful perusal shows the painstaking labor that its production must have entailed. He proves conclusively that dermoids are never found in any part of the ovary except that portion which contains Graafian follicles, and that dermoids spring from Graafian follicles. It would be an insult to the intelligence of this audience for me to go into the various subdivisions of the ovary and broad ligament. You all know that the dome of the ovary is the portion in which the Graafian follicles arise, and necessarily the only portion in which ova are formed. You also know that the hilum of the ovary contains the remnants of the Wolffian body, and that it is to all intents and purposes degenerated kidney tissue. The part of the broad ligament just

underneath it, known as parovarium, as well as Kobelt's tubes and Gartner's duct, are nothing but the ducts of this Wolffian body, which have undergone more or less degeneration, and they bear the same relation to this organ that the hilum and ureter do to the kidney. Mr. Sutton deserves great credit for the painstaking care through which he has proven that dermoids are never found either in the hilum nor in any part of this degenerated tube mass. He has proved positively that they never originate where a Graafian follicle is not found. This coincides fully with my own belief. It is a great pity that the testicle has not been worked in the same way; but my belief is that when thoroughly examined we will find dermoids of this organ never arise in any part except the semen-producing portion. My own labors have been very much simplified by this work of Mr. Sutton's, and as he has proven that dermoids never arise anywhere but in the Graafian follicle, I have only two organs to deal with. One is the Graafian follicle wall itself and the other is the ovum. The one great mistake that Mr. Sutton has made, though, is in allowing himself to be influenced by the older writers into believing that the fibrous tissue structures, which are found in these tumors, originate in the stroma of the ovary, and are not a part of the new growth. My experience, coupled with the long account of the cases which he has published in his recent work on the ovary, makes me sure that every tissue of the adult body is duplicated in dermoids. In short, that we not only have the epiblast, as all the older writers have taught us to believe, but a mesoblast and

hypoblast as well. He has shown conclusively that the common ordinary ovarian tumor is little less than a dropsy of the Graafian follicle. He has also shown that in the multilocular tumors there are many cases where nothing is found but one little patch of skin by which the case could properly be classed as a dermoid, and he uses this as an argument to show that the two shade into each other. With this I am fully in accord, except the conclusion. In my belief, one little patch of skin represents the original site of the ovum, which had never been set free from the wall of the Graafian follicle, and, as I will show later, got its developmental start, which could result in no higher grade of growth than a small patch of dermal structure. The fact that in multilocular tumors some of the sacs are simply ordinary dropsies of the Graafian follicle and others dermoid, shows nothing but that by the disease which started the ovarian structure to growing, in some of the follicles the ovum was destroyed, leaving nothing to show for its site of growth; in others the ovum was set going, and the dermoid was the result. But this reasoning may be a little premature until you go over with me my own work, although I have thought you would understand my own views better after a thorough digest of this most valuable paper.

The first post-mortem I ever made on a dermoid went a long way to convince me that its production was due to some definite physiological law which had gone amiss. It contained a fairly well-formed upper jaw with an incisor, a canine and a bicuspid tooth, inserted into a well-formed alveolar process, in their proper order.

It might very easily have been mistaken, had it been found in an Indian mound, for a piece of the upper part of a head, the rest of which had been destroyed by chemical activity. The age of the patient was 60, and the tumor had been known to exist for forty odd years. It was double, the opposite ovary containing a mass of stuff which looked like liver or spleen tissue. The post-mortem being made in the country in very hot weather, the specimen spoiled before I could get it under the microscope, and was so soft from the cause of death, which was dysentery, that nothing could be made out upon microscopical examination. But enough tissue was present to convince me that there had been an attempt at the formation of parts of a human frame. From this time on every dermoid that has come within my reach I have carefully studied, and the fifteen years' experience has brought me to the conclusion that the theories, which have heretofore been proposed for the production of dermoids of these regions, is totally inadequate, and that while we have to look to embryology for their cause, still, it is not in the embryonic state of the mother herself, but that of her individual ova that we will find the true solution. My belief is, as stated before the Cincinnati Academy of Medicine about a year ago, that ovarian and testicular dermoids are due to the functional parts of these organs going wrong in the development of ova and spermatozooids. Dermoids of the orbit or other facial cavities, as well as those of the median raphæ and mediastinum, I think are undoubtedly due to the doubling in of little islands of the epiblast as has heretofore been taught.

They are undoubtedly caused by some pathological conditions in the fœtal state of the individual. But when it comes to the ovary and testicle, we have a totally different state of things. The Wolffian body springs directly from the epiblast. After several months' existence the kidneys spring from one side of it and ovary or testicle from the other, thus having the life history of an organ interposed between the epiblast and the beginning of the permanent genito-urinary structures. We might naturally expect dermoids of the kidney to be equally common, as in the ovary and testicle, if they were produced by this doubling in of the maternal epiblast, whereas the fact is that they are almost unknown. But, still, a stronger proof is that a dermoid of the Wolffian body has never yet been reported. It would be useless for me to tell a body of gynæcologists that the remnants of the Wolffian body in the adult state are found in the hilum of the ovary and testicle, whereas Bland Sutton has proven conclusively that dermoids of the ovary never occur in any part of it, except in the Graafian follicle portion of the ovary, which is the ovary proper. They never occur in its hilum, and are also never found in any part of the broad ligament. So it would be very improbable to think that the maternal epiblast is responsible for the dermoids of either ovary or testicle, after it has passed through all the transitions necessary to the formation and functional activity of the Wolffian body, and then given origin to the kidney, the ovary or the testicle. If this was the case, one very telling point is that we would naturally expect dermoids of the kidney to

be equally common with those of the ovary and testicle, whereas the truth of the matter is they are almost unheard of. The stumbling block over which most authors have tripped has been the assumption that connective tissue found in dermoids came from the stroma of the ovary, and not from a new formation; whereas I am sure, from a specimen that I found last spring, that this is a great mistake, and that dermoids contain not only epiblastic, but hypoblastic and mesoblastic structure; in other words, every tissue of the body is represented in dermoid formation. The thing that proved this more conclusively to my mind than any other one specimen was finding the inside of a heart almost perfectly formed. This, no one will contend, comes from anything but the mesoblast, which is necessarily bound to be made up of hypoblastic structures in the same proportion as those of the epiblast. This specimen had a well-formed mitral valve, the columnæ carneæ, chordæ tendinæ, and all the muscular structures necessary to the formation of heart, except they were incorporated in the wall of a cyst and lined with a perfect endocardium. The semi-cartilaginous ring that separates the ventricle and auricle was plainly marked, and there was quite a good attempt at the formation of the auricle as well as that of the ventricle; so much so that any first course student could have seen it for himself. In fact, I have tried the specimen on my class, and found it was recognized at once, without my prompting, as to what it was. It was exhibited at the Academy of Medicine, and identified by all the members present.

About the same time I found an-

other unique specimen, which contained one bicuspid tooth. High up above it, on the wall of the cyst, was the usual elf lock; the hair of this one being about six feet long; and, strange to say, along the side of the tooth, a little below it, was about half the tongue fairly well formed, covered with the proper kind of papillæ, so as to be recognized beyond doubt.

Thus, in two successive specimens I had a clear, clean-cut attempt at the formation; in one case, of a heart, in the other case, of a head. The organs were so well arranged that it could not have been by chance; it could only have been by a weak effort to follow out the general laws necessary to the manufacture of a human being. I arrived at this conclusion in the exhibition of the specimens before the Academy of Medicine, and I expressed the opinion that ovarian dermoids were due to the faulty development of the ovum itself; not of the ovum from which the mother sprang, but of her own individual eggs. I stated that we do not know what the ovum would do if retained and nourished without the possibility of fecundation, because it is always thrown out through the parturient canal and lost, so there is no possibility of its being nourished. My belief was that pathologists heretofore had overlooked the ovum entirely, for nowhere could I find an allusion to it as a source from which dermoids spring. In the discussion which followed, Dr. Robert Stewart drew my attention to the condition of the ovum just before its full development, and following up the hint he then gave, I believe I have arrived at the true source of ovarian dermoids.

Briefly stated, it is this: The ovum, to the point of its separation from the wall of the Graafian follicle, is not only a protozoon in appearance, but one in deed and truth. It contains both elements, male and female, and, like the tapeworm and other higher grades of protozoa, it has the power of auto-impregnation. Just about the time it separates from the wall of the Graafian follicle, it extrudes two globules, which are known to be one of the polar cells. The epithelial cells in the testicle, after they are split up into the spermatozoa, each one of its elements, just before the spermatozoon is perfectly formed, loses a small lump of protoplasm called the spermatogenic granule. This marks the point of separation between the protozoa and the higher grades of animal life. I believe the failure of either the ova or the spermatozoon to leave the bisexual condition is the point from which dermoids of the ovary and testicle spring. There is no further reaching law than that which teaches us that the failure of a physiological function is sure to be followed by a pathological result, and that, as the shadow follows the sun, so the pathological specimen is the result of some physiological error. The reason why our embryologists have so far been deceived, is that they looked at the wrong points of development for the formation of

these queer monstrosities. They went back to the development of the individual, whereas they should have gone to the pathological condition of his or her reproductive organs. It is true that these dermoids spring from the epiblast mostly, but they also have a hypoblast as well as a mesoblast, and, after all, it is nothing but an attempt at auto-impregnation that results in these creatures of a "Walpurgis Night." The conclusions, then, which I arrived at are: First, that embryology is the proper field in which to study dermoids, and it is in the formation of the ovum itself, and not during its stage and in the manufacture of the individual, that we must expect to find this fault. Second, that no practical use has yet been made of the long-known fact that up to a certain point we are all protozoa, just as well as in the later stages we become amphibians and such like. Third, that it is in the study of this protozoic age that we must expect to find the seeds which result in the formation of dermoids. Fourth, that my studies accentuate the fact that a human being in its development passes through all the stages of animal life, from the lowest to the very highest, and that a failure to pass from one stage to the next highest is sure to leave its imprint in the shape of a pathological condition.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of December 7, 1893.

THE VICE-PRESIDENT, DR. J. M. BALDY, IN THE CHAIR.

SURGICAL SHOCK. BY CHARLES P. NOBLE, M.D. (Page 206.)

DISCUSSION.

DR. ANDREW F. CURRIER, of New York :

This subject is one which may well engage our earnest attention, for there is certainly no question which is of more importance and with which the gynecologist is more concerned before attempting a serious operation than whether the patient is going to withstand the shock of it, therefore, I think that the remarks which Dr. Noble made in his very elaborate and excellent paper in regard to the selection of cases and the preparation of the patient are very timely. I think that if more discrimination were used and more time allowed for such preparation in some of our cases, the results would not be so disappointing. Of course, there are cases in which the condition is urgent, and these must be treated as the emergency arises.

One of the conditions which is laid down as a predisposing cause of shock is primary hæmorrhage, but I think the importance of this is often over-estimated. There is probably not one in this room who has seen an abdominal section in which an amount of blood exceeding a pint has been lost. When we realize that the volume of blood in the body, most of which is circulating in the vessels, is 10 per cent. of the weight of the body, it must seem unreasonable that the loss of a few ounces would in itself prove serious, the cases being rare, indeed, in which the hæmorrhage cannot be controlled before a very large quantity of blood has been lost. Therefore, it seems to me that loss of blood *per se* is not in most cases a cause of profound

shock. In this connection it may be well to remember the relative ease with which parturient women bear very considerable losses of blood, and also that the treatment for post-partum hæmorrhage, advocated years ago by one of the most famous of Philadelphia's obstetricians, Dr. Dewees, was bleeding at the elbow until collapse occurred. He narrates in his work, cases in which a quantity of blood that seems almost incredible was removed, and, strange as it may seem, these cases all recovered. There is, however, a form of hæmorrhage which is a serious cause of shock, and frequently, or relatively frequently, a cause of death; I refer to what is called passive hæmorrhage. This form of hæmorrhage has especially obtained since the great operations within the pelvis have become so numerous. It is easy to understand why patients, in whom oozing of blood continues for twenty-four or forty-eight hours, or even longer, with the associated conditions, do not get well. During my experience as an interne in the Women's Hospital, I saw two cases of this character, both of which were fatal, and I know of several others. I do not think that I have heard of a case of this character in which recovery has taken place.

The condition of anæmia and sepsis—and I think that anæmia may be used in a broad sense so as to include conditions of sepsis—is certainly predisposing to serious shock, and it is this class of cases, I take it, to which Dr. Noble alluded as those in which sufficient time should be given for preparation, but there are cases of this kind in which the conditions never become favorable for doing a serious and prolonged operation, and if we determine upon operation the question of shock becomes an important matter. To

use a Hibernicism, the best way to treat it is not to have it at all, but this, of course, is a matter not always easy of accomplishment. There is a means of treatment which was not referred to in the paper which, it seems to me, has an important bearing in lessening shock. I refer to the use of the Trendelenburg position. I know that in Philadelphia it is not favored to the same extent that it is in New York, but, if I may be allowed to express a personal opinion, I certainly feel that in the experience which I have had, my results have been better than before this means was used; not that I believe that all cases in which abdominal section is done, should of necessity be treated in this position. Large abdominal tumors seldom require it, but I almost never do a pelvic operation without taking advantage of this position.

The statement which was made in regard to the danger of using wet cloths about the body of the patient is, I think, quite true. I believe that there are many cases in which serious and even fatal complications arise from the careless use of wet towels upon the patient's body. I have thought that I could trace one or two cases of pneumonia and pleurisy to want of proper care in the use of these measures, and I believe that the more careful we are in preserving the body heat of the patient and preventing excessive radiation the less likely are we to have decided and profound shock.

The recommendation which was made in regard to the use of heart stimulants suggested to my mind the possibility that in the use of so many drugs we might overstep the bounds of prudence. I come here to-night as a learner on this point. I have used all these drugs that have been recommended, and it has been a very difficult question for me to decide whether any of the good results which have followed have been *post hoc* or *propter hoc*. We know that certain cases in which the shock is profound will react any way, and we know that a certain number of other cases will die whether we use large doses of strychnia or anything else. The important point is to decide between these extremes, and that is the point upon which I wish to be informed to-night. I know that in this city you are in the habit of using these drugs to a greater extent than we are.

The use of oxygen, which was recommended, is to me a very desirable method of

treatment, and I have in the last two or three years had occasion to use it in a number of cases in which the results seemed to be very satisfactory. I think that if the element sepsis pertains to the case, the free use of the oxygen, commenced almost as soon as the operation is concluded, will enable us to avoid some of the complications which we often see.

Reference has been made to those cases in which the condition of shock seems to be prolonged for several days. I would suggest that, possibly, these are not cases of shock, but cases in which sepsis is present before operation and manifests itself in all its virulence in the course of the subsequent treatment. We have all seen cases of that kind which have struggled along for a few days, or which, with the assistance of stimulants, we are able to keep alive for a week, and then they die, and the autopsy shows no lesion to which we can attribute death. As we become better informed in regard to the bacteriology of these cases, we shall probably find that a toxic element is circulating in the blood, and is so overpowering to the vital resources that the patient is unable to react.

DR. WILLIAM GOODELL :

I wish merely to allude to one method of preventing shock, and that is not to pinch the ovary in its removal. I have repeatedly seen the pulse suddenly fall when the ovary has been caught with forceps. One can readily see how compression of such a sensitive and tender organ may have that effect.

I heartily concur with the observations presented in the paper. During the past year I have adopted some of Dr. Noble's methods. I use nitroglycerine with digitalis in the way that he has mentioned, but I put more faith in strychnia than in any other drug. . . . Where the stomach is irritable in shock I rely upon alimentation by the bowel.

I fully agree with the objection to the use of cold wet cloths, but if the cloths are kept hot and frequently changed, I think that they can be used with benefit. I prefer them to the dry cloths, which cannot be kept hot.

DR. W. EASTERLY ASHTON :

In almost all respects I agree with Dr. Noble in his views on shock. I would insist upon the necessity of prolonged preparatory

treatment. It is my custom to take at least a week for preparing patients for abdominal operations, barring, of course, emergency cases. During that time I rely almost entirely upon the daily use of strychnia as a preventive of shock. I at once put the patient on the hypodermic use of one-fifteenth grain of the drug three times a day. Since adopting the plan I have had practically no shock even in severe operations. I believe that strychnia acts as a cardiac stimulant, and that it has a marked effect in reducing the number of cases of shock.

It seems to me that, barring the good results that we get from a carefully-selected preparatory treatment, the rapidity of operation has a great deal to do in the prevention of this grave surgical condition. I do not agree with Dr. Goodell that it is easier to sterilize wet cloths than dry cloths. Personally, I do not believe in the use around the seat of the operation of anything that has a chemical upon it. I rely entirely upon sterilization by heat. Those who have had experience with the steam sterilizer know that everything that comes out of it is absolutely dry. Sterilization for three fourths of an hour or an hour prior to an operation practically makes certain that our material is sterilized. The steam sterilizer will kill everything but spores. We can be infinitely more certain of our towels being sterile if we use steam than if we soak them in an antiseptic, as, for example, the acid solution of mercury. By sterilizing with steam we get rid of the rapid evaporation of moisture about the patient.

With reference to the heat of the room: That is an important point; it should not be over 80°. I have seen on several occasions the patient profoundly shocked from having the heat too high. Every one in the room has been covered with large beads of perspiration and the patient in the same condition. I would rather run the risk of a pneumonia than to subject the patient for any length of time to an extreme degree of heat.

DR. JOSEPH HOFFMANN:

As a means of preventing shock it has been suggested to have a table so arranged that the temperature could be kept up by steam or hot water circulating in tubes. This is a very sensible proposition. In this way the temperature may be kept up, and the use of wet

cloths permitted if the operator prefers them.

So far as medication is concerned in the prevention of shock, I think that those gentlemen are nearly right who question the use of certain drugs, as strychnia and digitalis, on account of their mode of action. We all know that digitalis and strychnia are both slow-acting drugs. If we wish to prevent shock, the stand that Dr. Ashton takes is a sensible one, and I think that we will reach the real scope and applicability of strychnia and digitalis by administering them for some days previous to operation.

There are also drugs which can be applied sensibly at the time of operation. These are nitrite of amyl and nitroglycerine. Nitrite of amyl will prevent shock, and nitroglycerine is its sister, and is, perhaps, a more dangerous drug in a very weak patient.

Another drug which we find slightly passed by, but which is rather quick in its action, is atropia. Atropia will bring up the condition of the patient from one of almost absolutely clammy inaction to a certain amount of color, drying the skin, and producing more or less increase in the heart action.

The Trendelenberg posture is an adjunct in the prevention of shock, but whether or not a lengthy operation is best completed in the Trendelenberg posture is another question. We do know that throwing the blood current back into the head and heart has its uses.

The use of wet cloths if allowed to become cold is to be deprecated, but the use of cloths wet and hot is one of the best means of keeping up the temperature.

Last, but not least, in patients who are very weak, or who have lost a great deal of blood, shock is often obviated by flushing with very hot water and allowing it to remain. The absorption of the water and the action of the heat on the solar plexus are certainly of great benefit.

DR. JOSEPH PRICE:

We might easily classify our surgery of the present day as acute and chronic, slow and rapid. Before the days of anæsthesia surgery was commonly done with a dash and precision, and we still have in our midst a few of the old school of rapid surgeons, and in their work we rarely find shock. While

Agnew was not a very rapid operator, he lost but little time, and shock in his hands was exceptional. In Dr. Thomas Morton's hands shock is scarcely known. I recall some of the surgery done many years ago, for instance, Dr. Nathan L. Smith, of Baltimore, amputated my brother's leg in less than a minute, without shock and without an anæsthetic. At the present day we have a great deal of what we may call chronic surgery. Some begin at eleven o'clock and end at three. I have known operators to stick to it six hours. In these cases we have shock, and everything done predisposes to shock. I am surprised that so many of these patients ever react or get off the operating table. Keith alludes to two or more cases operated on before the class where the pulse disappeared in the corridor on the way back to their rooms. Keith is one of the most dexterous surgeons that I know of, and the difficulty probably was that the patients were anæsthetized in a side room and time was lost in getting them to the clinic and from it. I know that in my own experience I try to minimize the duration of anæsthesia, both time and quantity, and this lessens shock very perceptibly. At present shock is simply unknown. What is sometimes called shock is simply water-logging with an anæsthetic. A few days ago I removed a huge, hard tumor, 22 inches in length, 14 inches in width, and weighing 50 pounds. The woman was returned to bed with a pulse of 90, and it has not gone above that figure. I was ready before the ether towel was placed to the patient's face. I make it a rule to have everything ready before the ether towel goes to the patient's face. Just here I may allude to how much hæmorrhage influences shock. I am satisfied that many of the deaths attributed to shock are due to accidents in the operation, such as hæmorrhage or tying of one or both ureters in hysterectomy, both vaginal and supra-vaginal. Pozzi calls attention to this, and I have many times insisted that in many cases where death is attributed to shock, it is due to hæmorrhage and unrecognized accidents in the operation. Take the sudden deaths from ectopic pregnancy. Of thirty-five cases in Dr. Formad's hands, thirty-one died in less than four hours after the rupture, and the remaining four within twenty-four hours. They all died from hæmorrhage or what is sometimes

called shock. In ruptured tubal pregnancy we have a condition which is due to something more than the loss of blood. The quantity may be small, so that we may say that there is an element of shock due to the presence of the blood or to the rupture. The hæmorrhage is not sufficient to explain the alarming symptoms and speedy death.

With regard to the use of heat and moisture, the practice of using wet gauze placed on dry towels overcomes the objection of applying the wet cloths to the patient's body. If only dry towels are used, your instruments are apt to get away from you. By using the dry towels and damp gauze on top, you have a clean material about your wound that will favor rapid work, and not result in those little accidents which come from dry towels alone, and at the same time you keep the patient dry.

A word in regard to the severe forms of disease, the cases of sepsis alluded to. There is surely something decidedly faulty in a man's technique who loses a case on the fifth or sixth day from sepsis. I have now a patient with a pulse of 76 and a temperature of 98.6°, who was operated on three days ago. The whole omentum was bathed in pus. When I finished the toilet with two pitchers of water, I was satisfied that the woman would get well. If I had practised the dry treatment, I should have allowed enormous quantity of filth and débris to remain, and the patient would have died of sepsis in five or six days. Again, in this same group of cases, even when carefully irrigated, the character and the quantity of the fluid that escapes from a well-placed drainage tube is a strong argument in favor of following the practice of irrigation and drainage. The condition of affairs that follows drainage and irrigation is that of clean tongue, slow pulse and cool skin, and I insist that the surgeons who practise such toilet rarely have cases of sepsis. All such cases can be saved by good surgery, irrigation and drainage.

Here I should like to refer to the use of opium before, during or after operation. I insist that it is thrice harmful, first, last and all the time. I see nothing but mischief and harm come from its use. I insist that the abdominal surgeon who does not know how to get along without opium has not yet learned how to manage his cases. The use of opium favors a mortality.

DR. G. I. MCKELWAY :

I wish to say a word about strychnia, which has been referred to us as a slow-acting drug. I think that if strychnia is given hypodermatically in sufficient doses to have an effect, it will show that effect in thirty seconds. I have noticed this a number of times. The hypodermatic injection of one-fifth or one-tenth of a grain of strychnia is followed by an increase in the force of the pulse in thirty seconds. I, therefore, do not think that it is true that strychnia is a slow-acting drug when given in sufficient doses to have an appreciable effect.

In regard to the dose of strychnia; there is a tradition that the dose is one-sixtieth of a grain. When we give a cathartic, we give enough to have some appreciable effect; when we give a soporific, we seek to do the same; but in the administration of strychnia, until lately, it was given in these very small doses, and no one ever saw any effect from it. Dr. Noble speaks of giving one-fifth of a grain in twenty-four hours. I have on one occasion given one and five-eighths grains in twenty-four hours, hypodermatically. The woman is living to-day, and I do not believe that she would have been without it. I saw another case in which the surgeon used one and three-eighths grains in twenty-four hours, and the patient is living, I believe in consequence of this use of strychnia.

I do not believe that atropia *alone* is very helpful in shock. It will dry the skin and contract the capillaries everywhere, but any one who relies on it *alone*, and gives excessive doses, will find its inconveniences and dangers greater than those from large quantities of strychnia.

Dr. Price spoke of the element of time in operation. I agree with him in that, yet I do not believe that, because an operation is a short one, we will have *no* shock. He speaks of the rapid amputation of a leg being followed by no shock. The daily experience of those about hospitals in seeing men brought in with legs taken off by locomotive wheels, taken off immediately, cleanly and without hæmorrhage, and the injured man profoundly shocked, does away with the theory that a rapid operation will have no shock. Other things being equal, we will all agree that rapid operation is best for the patient.

DR. CHARLES P. NOBLE :

I am glad that the paper has elicited such a full discussion. Some surgeons may see no shock, but I see it in the desperate class of cases on which I have to operate, and this is one of the subjects to which I have given as much attention as any in surgery.

As to primary hæmorrhage as a cause of shock, I have seen very little. In my work there have been only two or three hæmorrhages that amounted to anything, so that I have not had a chance to know what hæmorrhage has to do with shock. I think that I have had four cases of passive hæmorrhage in some 200 abdominal cases. Three of these I did not open; two got well, and the other died. In the fourth case I opened the abdomen, and washed it out, and she got well. If I had another such case, I should open promptly. I think that is the secret of success. The patients die from the slow oozing of blood, or from sepsis.

Whether or not we can ever stimulate is a question that has agitated me a good many times. I have always used stimulants (except alcohol) hypodermically, for the stomach is unreliable when the vitality is at a low ebb. Where the drugs are used hypodermically, and the effect is watched by a careful man or a well-trained nurse, I have never been able to see any bad effect. I have used the order which I have mentioned dozens of times, and have never been able to see any ill consequences. Therefore, from my present standpoint, I am inclined to continue.

The point raised by Dr. Currier as to these cases being septic, in which case shock keeps up for some days, I think is well taken. So far as I remember, I have had two patients who died on the sixth day, where I could see no reasonable cause of death, except shock, and where the post-mortem showed no cause of death in one case, and the other I could not secure an autopsy. I do not think that these cases were septic. In other cases, where the shock has lasted several days, recovery has occurred. I have now two women in the hospital in whom shock kept up for four days. There was no improvement during the four days, the pulse keeping at 165, with slight fluctuations. Undoubtedly there was no sepsis. While sepsis may play a part in some cases, I do not think that it is the explanation in all. I am inclined to think that

in some it does play a part. Those cases which are most apt to have shock are those in which a little débris is liable to be left; pus cases that have been very sick, and where you have to tear out the appendages. A little débris remains, no matter how carefully you irrigate, and this does cause some sepsis, —not a true septicæmia, but a septic absorption.

Now, as to the heat of the room, I think that 80° is a pretty good maximum. I would rather have it 80° than 70°.

I do not myself like antiseptics about the field of operation. Carbolic acid irritates the skin, and the bichloride spoils the instruments. I am perfectly satisfied to use towels sterilized by the Arnold sterilizer. I think that heat is a more reliable germicide than chemicals are.

With reference to the prevention of shock: When I have to operate on a woman who is very feeble, I have a hot-water bottle, not filled very full, placed under her back, and another between her legs. This is not a hot-water bed, but it is a good substitute. I always use this in cases where I have reason to expect shock.

I was glad to hear what Dr. McKelway said about strychnia. I do not feel the pulse myself, but the anæsthetist will tell me, a few seconds after a dose of strychnia is given, that the pulse is better. In the physiological laboratory both strychnia and digitalis act rapidly, so much so that Dr. Wood recommends digitalis and strychnia for the collapse from ether. If there is any place where we should have a drug that acts quickly, it is under such circumstances. If they will do it in the physiological laboratory, I think that they will do it on the operating table.

And now concerning rapid and slow operating: I believe as strongly as anybody that we should not waste time. A well-organized operation is as important as any other point in technique. The surgeon should wait upon the patient, rather than the patient upon the surgeon. The plan of letting the patient go to sleep, and be kept waiting for the surgeon, is very reprehensible. After you begin an operation, my judgment is that great hurry is a mistake. Every day I operate more slowly, and every month my results are better. I average 33 per cent. longer in operating than I did two years ago. I was surprised myself to see how much longer time I took. Whereas,

in my first 100 cases I lost 17 per cent., in my last 118 cases I lost 4 per cent. The question of time is but a small part; the question is, What you are doing in that time? It is better to spend fifteen or twenty minutes longer, and be sure that everything has been properly done, than to work rapidly and have an incomplete operation.

In regard to morphia: For two years I practically used no morphia after operations. I would not average one hypodermic to twelve sections. During the last two years I have used some morphia, and I have no complaint to make of bad results. I do not use much. I do not average more than a fourth of a grain to each case. If the patient is shocked, one-eighth of a grain of morphia makes her better. Dr. Price does not use it, so he does not know whether it makes them better or worse. As his opinion is not based on experience, it is worthless. The result of my experience in the last two years leads me to consider that it is a good thing. The reason that it formerly did harm was because patients were filled up with it, and their bowels were not kept open. If the surgeon will use it to lessen *extreme* pain, and at the same time keep the bowels open, the patient will do better, and suffer less, than if it is not used. A drug which I have recently used is codeia. Half a grain of phosphate of codeia will make a patient comfortable if the pain is not too great, and it does not interfere with the bowels. If the suffering is severe, the effect of codeia is very brief, and in such cases I use morphia, giving only enough to relieve excessive suffering.

THE EFFECT OF CASTRATION ON WOMAN, AND OTHER PROBLEMS IN GYNÆCOLOGY. BY DR. GOODELL.
(See page 190.)

DISCUSSION.

DR. CHARLES P. NOBLE:

I am sure that I but share the pleasure of the Society in listening to this elaborate and charmingly written paper by Dr. Goodell. Certainly, there is no subject, or set of cognate subjects, of more importance than those which he discusses. My own experience has been somewhat different from that of Dr. Goodell. Formerly, it was my invariable

custom to ask every woman who recovered after removal of the ovaries in regard to the effect of the operation on her sexual life. I did this in about 125 cases, and I was never told by a single one that the operation had lessened the sexual desire. Having satisfied myself, as I thought, that the theory supported by Dr. Goodell was a myth, I ceased asking the question. Women would often say that they had never had very much sexual feeling, and that the operation had wrought no change. Another woman might admit that she had a good deal, and would state that it had not been modified. Those in whom copulation had been painful would say, that whereas it had been painful before, it was no longer so. As the replies in all my cases were upon the same line, it seemed useless to pursue the investigation. We all know how careful a man Dr. Goodell is, and I am perfectly willing to accept his statement that it is true that in a certain number of these women the sexual instinct becomes less (these cases being the ones he has investigated); but we all know that sexual desire in women varies very much. Different women have different degrees of sexual feeling, and it differs at different periods. Unless his investigations covered that point, and have embraced a large number of cases, and extended over a long period of time, the result may have been due to general causes. It would be interesting to know upon *how many cases* his conclusions are based.

There is one exception to what I have said. I have found among young women who have not had children a disagreeable result of removal of both appendages, which is caused by the atrophy of the sexual organs, including the vagina. As in these cases the vagina has never been stretched by child-bearing, there is often painful copulation. In these cases I have already adopted the plan to save an ovary where I could, although I took out both tubes. Where the woman has not had a baby I try to leave an ovary, or a portion of an ovary. I agree with Dr. Goodell that in that class of cases this is a good plan. Whether or not it is a good plan in every case is a question. I should prefer further evidence before abandoning the accepted teaching.

Even if we do accept Dr. Goodell's conclusion as to loss of sexual desire as correct, I think that, if we set good health with less-

ened sexual desire in the balance with chronic invalidism, there is no question as to which preponderates. At the same time, this is a grave matter. Anything that affects the family is most serious. It is true that in a considerable percentage of cases loss of sexual desire due to removal of the ovaries causes marital unhappiness and results in disagreement and breaking up of families. It behooves us all to pay more attention to the matter of leaving a piece of the ovary wherever we can. It is seldom that both ovaries are so diseased that we cannot save a piece, and we should, therefore, look more carefully into this subject. But we should be careful about accepting this allegation as a cause of disease, etc. Other agencies may be at work. It would be interesting to compare the percentage of divorces among this class with the percentage in the community at large, and also with the percentage in the class of cases where women are invalid from other causes. Physicians are prone to fly to conclusions. The Scotch verdict of "not proven" must be accepted until there is exact evidence to the contrary.

As to the question whether these diseased tubes get well: Not confining ourselves to *pus tubes* but to *diseased tubes*, I agree that these cases can get well—but not *pus tubes*. I have seen cases get well, particularly puerperal cases. I have always taken the ground that, if a woman has an adherent appendage after she has had a baby, we should be very careful about advising its early removal. I recall a puerperal case where there was a large amount of pus in the pelvis. That was a cellulitis, although I know that I am considered heretical in saying it. She has had a baby since. I have operated on her since for hernia, and I know that both appendages are well, because I looked at them. She had four ounces of pus in her right broad ligament, which I let out. In puerperal cases, I agree with the general tone of Dr. Goodell's remarks, that we should be careful in operating for acute puerperal inflammation. As to whether, in those cases where the women had babies afterward, the enlarged tubes contained pus, I should prefer not to go too closely into the diagnosis. If we say diseased tubes, I agree that these large diseased tubes may get well. That *pus tubes* get entirely well is too much of a strain upon my powers of belief. I do not doubt that I

should have taken out these very tubes, but it is a question as to what we shall call them.

As to the so-called conservative operations on the uterine appendages, I am by nature a conservative man in the proper sense of the term. I have always been conservative in my work. It is always my desire to do the best that I know for my patient. That is genuine conservatism. I feel that I have always done this, and it is my purpose to continue. I have always saved ovaries when I could. I have excised pieces of ovaries, and have taken out cysts and hæmatomas and sewed up the rents. I have freed adhesions of the tubes and allowed them to remain. I shall collect these cases and write a paper about them. Wherever there is no serious disease in the appendages, and especially where women are desirous of becoming pregnant, or where there are good reasons why they should become pregnant, I would go as far as safety will permit in saving ovaries. If the woman has had half a dozen children, and has ovaries somewhat diseased and causing ill-health, it is a different matter. If she is 35 years old, and has diseased appendages and half a dozen children, it is less important that the ovaries be saved than if she were 21 and had had no children. I always try to talk this over with the woman before operation, and if she is desirous of having children and is willing to run some risk of a second operation, I try to save an ovary or a portion of an ovary. There is not a month passes that I do not leave a somewhat doubtful ovary.

DR. JOSEPH PRICE:

This discussion surprises me a little. While I feel that I am conservative, I am satisfied that I pick my cases. Further, I am satisfied that I pick the *worst* cases. I stand precisely where I stood eight or ten years ago in regard to this whole matter, but with added light and experience to fortify my position. With the first half of this interesting paper I agree wholly, except, perhaps, in regard to the question of the nutrition of the patient antedating the operation and also following. Authors usually lose sight of the fact that these patients come to us in a condition, aside from the old nervous phenomena and disturbances due to prolonged disease, of impaired nutrition. I have heard many members of this

Society state that they have come to them on stretchers, greatly emaciated. It is simply surprising after these operations, done for actual disease, how the nutrition improves. They regain flesh and strength, and the color returns. I agree in regard to the nervous phenomena incident to precipitated menopause, and I am surprised that more of these patients do not go to asylums. To precipitate the nervous phenomena of the menopause in one so feeble and exhausted from prolonged suffering, is adding another feather to depress the beam; but there are exceptionally few severe mental conditions following the great number and variety of operations done. I think I have only one case in an asylum out of a series of 2,400 sections. Reference has been made to Dr. Keith's results after hysterectomy. He condemns hysterectomy after taking up electricity, and says that at least 10 per cent. of his cases had some mental disturbance. I think that Dr. Keith forgets the history of his cases. It is interesting to read the history of these cases. He had them come to him for years, until they suffered marked anæmia. Their condition was desperate, physically and mentally, and it was the delay, suffering and anæmia that predisposed these women to insanity. If their nutrition can be improved in asylums, and the quantity and quality of their blood increased, they are discharged cured.

It is well in this connection to consider carefully the condition, local and general, antedating the operation. This Mr. Keith lost sight of. Mr. Tait contradicts it in his hysterectomies. I have done 118 supra-vaginal and 100 vaginal hysterectomies, and all that are not dead have sane minds. As regards insanity, we know that puerperal insanity is not uncommon. Many cases follow child-bed. Recently I had a woman a few days after delivery come at me like a lioness. She died in one hour of frightful mania. We also know that insanity occurs at most any time during lactation, and that a good number of these post-puerperal insanities go to asylums. I can recall a larger number of cases of insanity following labors, that I attended myself, than instances of mental disturbances following my sections.

To allude briefly to the restoration of health. I have now two very choice nurses, and no one but myself and Dr. Stewart knows that they have lost their appendages. Dr.

Stewart did one operation and I the other. They possess all the attributes of refined women. Many years ago I did a hysterectomy in a lovely young woman of 23 years, an excellent musician. She still plays and sings, and her voice is as sweet as ever. Again I did a section for double pyosalpinx. The subject possessed the finest contralto voice in the city; she continues to sing with an improved voice. I could cite a good number of cases of similar character.

Dr. Polk says the breasts disappear, and hair appears on the upper lip, etc. That has not been my experience.

In regard to the chronic cases, I am surprised that the author has so decidedly changed his position. I also feel that it is unfortunate for suffering and dying women that such a paper be published. He will probably recall a discussion in which he took part ten years ago (1883) in this hall, in which he said: "But after they have been reduced to great emaciation, and from four to six fistulous tracts have opened in different directions, my method of treatment in these cases is this: In the first place, if there is an opening above the pubes, I pass in a uterine sound and try to find some place in the vagina where the tip can be felt. Cutting down on this, I make an opening. By means of a ligature tied around the tip of the sound, I draw a drainage tube through the tract," etc. He called attention to numerous cases of that kind, and, I think, referred to some deaths. I will just say here that I constantly see large numbers of women dying from neglect, or just that sad condition he and others referred to in the discussion cited.

In regard to pregnancy following ligation or amputation of the tube, we all know that there is a great deal of careless and slovenly surgery done. In all probability the operator referred to ligated both round ligaments and not the tube.

Now in regard to the absorption of fibroids, the speaker said that all gynecologists had observed such cases. I have never known a fibroid to disappear except when I made it disappear myself by surgery. Replying to Dr. Noble in alluding to mortality post-puerperal, I might refer to the closure of the Queen Charlotte Maternity Hospital which was closed on account of post-puerperal inflammatory trouble. There were four deaths, and post-mortem showed acute suppura-

tive trouble of the tubes and ovaries. I might also call attention to the preface of Sir James Y. Simpson's article on pelvic phlegmon, where he quotes two post-mortems made by two Dublin surgeons. One found post-puerperal ovarian abscess and the other post-puerperal pus tubes.

DR. G. BETTON MASSEY:

There may be some question about every one present thanking Dr. Goodell for this paper, but to my mind there can be no doubt about the medical world doing so. The biography of an opinion given by him on one of the questions discussed, as well as the other statements in the paper, will ring throughout the world, and need to ring. These opinions answer a question which occurred to me in the early part of this evening: Why is it that great bodies of men once a week or once a month come together to discuss the technique and the surgical treatment of women, and yet none think it necessary to speak of the surgical technique of the treatment of men? We have hundreds of special tables to be used in opening the abdomen of women, and, so far as I know, not one devised for opening the abdomen of men. The answer suggested by this paper is that it is a fad—that it is a most remarkable fad—that it is worse than a fad; it is almost a crime that men should continue blindly to perform these operations on cases which, as has been said to-night, are seldom followed by death, and often followed by restoration to health under proper treatment.

I was particularly glad to hear that Dr. Goodell, with his large experience—an experience tempered with that important element, time, had reached these conclusions. I have myself had some opportunities of observing cases that had been castrated. In several cases I have been able to see that there has been an increase of adipose tissue, which the reader of the paper hardly thought was frequent. One of these cases was possibly the best illustration of the reason for this surgical craze, for it was an actual instance of the disappearance of pain from the removal of diseased ovaries; yet this case, after going through the misery of an enforced menopause, is unable to carry a slight weight up stairs or fulfil the duties of her former occupation. She has decided increase of the adipose tissue and decrease of graceful lines, although

yet hardly 33 years of age. There has also been a marked change in the hair; from a beautiful light chestnut the hair is changed to a dark dull chestnut. I do not doubt that there are other changes that could be observed in this case. The operator in the case knows nothing of these changes, for he lives elsewhere, and I have no doubt that it is recorded by him as a perfect illustration of the absence of detrimental change as the result of removal of the ovaries.

DR. M. PRICE:

There are two or three points to which I should like to refer. I entirely agree with Dr. Goodell in regard to leaving healthy ovaries. In fact, I do not for one moment suppose that an intelligent surgeon would remove a healthy ovary and tube, unless he had some extraordinarily good reason for so doing. I am surprised to learn that Dr. Noble has one treatment for one kind of women and another for another class. If a woman has had several children she has no need of ovaries—you can rob her of them. You might as well say that if a man has a million of dollars, you can take half away. What is surgery for one is surgery for another. We must do what is demanded that the patient may be restored to health, and nothing more. If the surgeon can leave a healthy ovary and tube, it is nonsense to say that he would take it out.

As to the mental condition of these patients: I have carefully noted many of the women that I have treated and operated upon, and I have yet to find one who does not show all of the mental clearness that she ever did. On the contrary, many of these women are the pictures of womanly beauty. Wrecks before operation, they are now everything that can be desired. I believe with Dr. Goodell that the removal of the ovaries and appendages does change the degree of sexual desire, but it as often exaggerates it as it decreases it. I have a letter in my office from a gentleman whose wife I castrated three or four years ago. For four years she had had no sexual desire, as the pain of her condition forbade any such condition. That woman now has all the sexual desire that she ever had. She has none of the unpleasant results spoken of. I have a woman in this city who never from her earliest recollection had any desire whatever. After removal of both ap-

pendages for pus (she was infected by her husband) that woman has to-day excessive sexual desire. I am confident that removal of the ovaries as often exaggerates this desire as decreases it. This condition is largely influenced by the mental condition. The removal of the appendages has, I think, little to do with the sexual desire after maturity.

I believe that the removal of the appendages will not produce insanity and mental alienation; on the contrary, in properly selected cases or diseased conditions of women already insane, operation will restore many of them to their usual sane condition. I know of three or four such cases in my own experience. I know, to-day, of two cases, moderately insane, who have diseased appendages. If operation is done, I believe that these will be relieved. Where insanity comes on after sexual life has closed, I believe that the removal of the appendages will do little, if any, good. I am confident that we will have to select our cases if we expect to do good in insanity. I believe that in the sane and in the insane it is our duty to remove pus tubes. I am convinced that where large diseased tubes have been found, and the woman has recovered and borne children, the condition is not in the woman, but in a mistake of the surgeon. It is a good thing in such cases to give salts, as one of our young gynecologists says, by doses, *where we are in doubt*, to clear up the diagnosis. If salts were given, the hard nodular tube would be difficult to find at the second examination, even for beginners.

DR. ANDREW F. CURRIER:

My only excuse for imposing a few additional remarks upon you is to thank Dr. Goodell for the paper which he has read, which I have enjoyed very much, and from which I have derived much profit. The subject has been laid down on broad lines which cannot be overlooked. It is a subject which is pressing itself upon us, and must come up for solution. I take it for granted that we must have formed some conclusion on this subject, which has been before the profession for many years. Much bad work has been done, as is inevitable in the settlement of every great surgical question. So long as man is susceptible of wrong judgment, mistakes will be made in the future. In regard to the

effect of the removal of the appendages from the young I take a somewhat different ground from that which has been taken by the reader of the paper. Is it not fair to assume that the condition of the human being after an operation of this kind would be analogous to the condition of the lower animals after the same operation? There is no operation which is done among the lower animals with greater frequency than that of removal of the ovaries. While, of course, such operations upon animals have no bearing on the intellectual side of the question, we must admit that they generally result in physical benefit.

With regard to the question of removing ovaries that are partly diseased, I think most men have decided that if the tubes are intact, and the ovaries only partly diseased, we are justified in attempting to save one or both ovaries. If the tubes are diseased, and the condition of the patient is sufficiently serious to warrant opening the abdomen, I do not see what advantage there can be in retaining either tubes or ovaries. We know what the essential portion of the tube is. If the pavilion end of the tube is destroyed, it matters not what the condition of the ovary is, I mean so far as the preservation of the organ for purposes of reproduction is concerned. Of course, there are other questions to be considered in this connection. I think that we may lay down the broad principle, which has been referred to by one or more speakers, that, given organs which are seriously diseased, the diagnosis being reasonably sure, they have no place in the human economy.

DR. JOSEPH HOFFMANN:

With regard to the sexual effect of these operations, I do not see how any man who studies or looks after his cases can come to the conclusion that in all cases there is a uniform result. I have not operated so often as some others, but I have had various answers to questions variously propounded. My results agree in all respects with an excellent discussion by Mr. Tait some years ago, who reached the conclusion that as operations of other sorts have different results, so this has different results. Certain it is that in some instances the sexual impulse has been increased to a remarkable degree. In others it has decreased, and in others not affected. I believe, in many cases where there has been

noticed a great change in the sexual impulse, that this has probably come from pathological conditions antecedent to the operation. I believe that the trouble comes on more frequently, before the operation, from the pain, than from conditions induced by the operation itself. So far as this result is concerned it must vary as the results vary elsewhere. We know that in many women, where the tubes and ovaries have been removed, menstruation persists. It used to be said that this was because the operation was not complete, but this answer is no longer competent. Where the operation has been thoroughly done and every vestige of ovary removed, menstruation may persist. Another curious fact to be noted is that in cases where the flow has not stopped, many of the women have all the signs of cessation of menstruation coming on. No matter how much they bleed, they have signs of the menopause. These things are not easily explained, and, perhaps, can never be explained.

So far as pus is considered, and its removal and its pathology in the pelvis, I think that one cannot understand how a pus-dilated tube or a pus-destroyed ovary can retain its functions. I only say that I cannot understand this. If a man has seen it and knows it, that puts it outside of my knowledge, and I cannot question the correctness of his observation. If we know that the gall-bladder is full of gall-stones and physiologically inactive, no one will say that it can contain normal gall or that it will regain its physiological function. No one will say that in abscess of the liver destroying it, the tissue that is once destroyed will be able to resume its oil-secreting and glycogenic functions. If this is true of one organ, it must apply to other organs.

With regard to the danger of dying from this trouble. When we say that the danger is remote, we forget the experience of those two French authors to whom we owe the pathology of these pelvic inflammations in great part. We also forget that the results of disease in one part are apt to affect other parts. Pus in the tubes we know may be transmitted to the kidneys, lungs and other organs.

So far as Dr. Massey's argument is concerned, that abdominal section is done only in woman and not in man, he forgets that the surgeon is a surgeon all over, that men are

operated on for gall-stones and appendicitis, so that the thing is not so one-sided, and it is not to be lightly taken up and dismissed even by men who do not do it.

DR. CHARLES P. NOBLE :

I have done the conservative operation in the sense of saving somewhat diseased appendages. I have had twelve or fifteen such cases in 200. There have not been any pregnancies as a result, but the women have one ovary or a piece of one, and I am watching the cases. I think that the time has come when we may attempt to do this. A few years ago the mortality was so great that it would have been sheer recklessness to have attempted such procedures. The primary mortality was too great to make it justifiable. Now, with the primary mortality absolutely zero, except in desperate cases, I think that we dare to take some chances, particularly when the women want it.

In reply to Dr. M. Price, I think that my position is perfectly clear. I deal differently with different patients and conditions. If the woman has somewhat diseased appendages, and is the mother of a family, I should hesitate far less to take out both ovaries than if she were a young woman without family. If she were desirous of having children, I should let her take the risk if she so wished, if there was any probability of good resulting.

As to whether or not these women die : I have this year seen four die. One refused operation in the hospital, and died in six months. Another case I saw as she was about dying with an abscess from the umbilicus halfway down to the knee. She had been sick for three years, but operation had not been done. The third case I was called to in the middle of the night. The woman was moribund, and immensely distended from peritonitis. Rupture of a pus tube was found post-mortem. The fourth case had been treated by electricity by one whose tongue never wearies in describing the harmful results of surgery. I am sure that many of these cases die. Ten times as many die as those who have not looked into the matter believe.

DR. B. F. BAER :

I wish to thank Dr. Goodell for his conservative paper and to express the hope that

it may do good in staying the hands of those who are quick to operate in cases in which pronounced indications do not exist, especially where the operation results in the total removal of only partially-diseased uterine appendages. I fully agree with the writer in the conservative position which he has taken, and I think that those who have listened to the discussion will go away with the feeling that we all agree with each other, except perhaps our friend Dr. Massey. But I think Dr. Goodell has been misunderstood by some of the gentlemen who have spoken. If I am not mistaken, he still advises operation where there is decidedly enlarging tumor, and where the disease is undoubtedly organic and not merely inflammatory.

In those cases in which the ovaries and tubes are small, but adherent, and there is consequently absence of marked tumor (after the administration of the dose of salts), very much may be accomplished in improvement of the nutrition by means with which we are all more or less familiar, among the best of which are the rest and special diet which have been urged and to which I would add certain local measures. Where anamia and exhaustion of the nervous system exist, as they do in many of these cases, the rest treatment is nearly always beneficial. But many patients are not able to bear the expense of a treatment which is largely experimental, and in many cases ultimately only palliative, so that the question here, as is usual, resolves itself into one of individuality.

In those cases in which I have made a diagnosis of pus in either tube or ovary, I invariably advise operation, because I believe the patient to be incurable without it. I do not remember to have seen a case in which I had made a diagnosis of tubo ovarian abscess get well without removal of the diseased organs. If the patient permitted me to operate, I always did so : if she did not, and recovered—I mean got entirely well and the tumor disappeared—I considered that my diagnosis of the presence of pus was a mistaken one.

Regarding the question of removing only the diseased portions of the ovary and tube, as was advocated and done originally by Schroeder, and more recently by Polk and others, I wish to relate a case that opened my eyes to the value of such conservatism.

About three years ago Dr. H. placed his

sister, Mrs. R., in my charge. She was 32 years of age and had been married thirteen years. She had had a miscarriage at the third month, twelve years before consulting me. This was followed by subinvolution and retroflexion of the uterus, from which she had suffered ever since, and for which she had received much treatment. She had not again become pregnant. The disease had passed into the chronic stage when local suffering is not prominent, but she was very much broken down and suffered from nervous exhaustion, so that she was practically an invalid. Her main object in consulting me was with the hope that she might be restored to fertility, as the desire for offspring was very strong and almost necessary for domestic peace. On examination I found the body of the uterus large, retroflexed and evidently adherent in the pouch of Douglas. There was a hardened mass at either side of the uterus, but not larger than the normal-sized ovaries and tubes. Indeed, the masses appeared smaller. The adherent ovaries, tubes and uterus, were movable as one body, but the uterus could not be replaced to its normal position. I made a diagnosis in accordance with the condition described, and strongly expressed the belief that the patient could not be restored to fertility, because of the changed condition in the uterus itself (it was fibrous), even should the appendages prove to be not seriously diseased. I therefore advised cœliotomy for the purpose of breaking the adhesions, restoring the uterus to its normal position, and removal of the diseased appendages. The operation was readily assented to, but with the proviso that I was to leave at least one ovary or a part of it, so that the patient would not be deprived of the possibility of offspring. She entered my private hospital and the operation was done on February 23, 1891. The retroflexed uterus and appendages were so covered and hidden by the organized false membrane as to be entirely out of sight. The false membrane was broken through, and then, by great effort, the uterus was dissected loose and brought forward, literally covered with shreds of the broken adhesions. The left ovary and tube were so firmly bound to the posterior surface of the broad ligament that I was compelled to tear them piecemeal from their position. A ligature was then placed deeply through the broad ligament and the shreddy pedicle

ligated. A calcareous mass was found during this dissection deeply located among the adhesions, showing the chronicity and age of the disease. The right appendages were found in an almost similarly diseased condition, and when they were dissected loose they also were in shreds, the tube having been torn off about two inches from the uterus.

Dr. H., the brother, was greatly disappointed at the extent of the disease found, but when I took up the pedicle needle and was about to transfix the broad ligament for the purpose of removing the remainder of the torn tube and ovary, you may imagine my surprise when I received a sudden command from him not to proceed. When I remonstrated that in this condition of the uterus the patient would certainly remain sterile, even if she had healthy appendages, and that her life would probably be sacrificed as a result of the imperfect surgical procedure which he was forcing me to adopt in thus leaving the torn and devitalized tissues as a menace to inflammatory and septic development, he repeated the command, saying that his sister would be willing to take the risk rather than be deprived absolutely of the hope of offspring. I therefore concluded the operation by closing the abdomen.

Now for the sequel. The patient made an excellent recovery and fifteen months afterwards was rendered happy in the birth of a child at full term! You may imagine my chagrin at having permitted myself to be so emphatic in my prognosis of continued sterility. But I was very glad to have had the opportunity of witnessing the establishment of a great principle and truth by this experience. When I received information that pregnancy existed, I was, of course, sceptical, and replied that the tumor was more likely the result of disease in the remaining ovary, as I had anticipated.

I relate this case in detail here because it has not been published elsewhere, and because it has so direct a bearing upon this paper.

DR. J. PRICE:

As long as the tube is patulous, the ovary may sometimes be saved. My brother, in criticising a class of cases among single girls who had never experienced the sexual relation, was criticising operations done for backache, and symptoms and mutilation

in the absence of demonstrable disease. Such operations should be condemned. Travelling over this country, I have given this subject of the suppurative forms of pelvic disease considerable study. I have operated for puriform disease in a number of the great hospitals of large cities. They have been exceptional cases. Recently, in a general hospital, I examined three cases of puriform disease, all angry and advanced. They had been tapped and drained, and were still suffering. During the preparation for a section, one of the three cases dodged the nurse, and she picked up the fourth case, and I operated on a woman whom I had not examined and removed a pus tube. I cite this to demonstrate the great frequency of puriform disease.

With regard to cellulitis, I have been over this ground many times, and really it is surprising to hear some of the recent discussions. Some prominent operators are against advocating the ancient methods of puncture and drainage, leaving behind the old cheesy, disorganized ovary and tube. Such counsel and practice are timid and unsurgical. No one would treat a necrosed humerus by simple puncture and drainage and leave nature to finish the work. We know precisely where we stand and what we can do by what we have accomplished in pelvic inflammatory disease, tubal pregnancy, etc. We know sufficient about the pathology to know what we should remove and what we should not. The mortality in suppurative forms of disease is thrice lower after early operation than in neglected punctured and drained cases. I know of dozens of women who have refused operation who have died within one or two years. Many others have returned in a few months or a year and asked for the removal of their trouble. I have a few such cases in bed now, recovering.

If Dr. Goodell meant just what he said in regard to puriform disease, I must ask him if he is really sincere. I must repeat what Dr. Thomas said to him ten years ago, "If so, he has allowed his emotions to influence him." An enormous number of the profession will be greatly influenced by the author standing on two stools. Again, this paper will cost many women their lives; again, it will increase the mortality of every operator throughout the land by giving us large numbers of eleventh-hour operations. Some one

will counsel delay and tinkering, and the patients reach us "reduced to great emaciation, and from four to six fistulous tracts have opened in different directions."

DR. W. GOODELL :

Dr. Noble says that he has never had a case in which sexual feeling was destroyed by castration. So I thought about my own case until years had elapsed, and I found myself mistaken, just as Dr. Noble in time will find himself mistaken. I have now in my pocket a letter received yesterday from a physician asking advice about a patient castrated two years ago by a friend of mine. In it he says that his patient "abhors sexual intercourse, and is in a pitiable condition."

I argued in my paper that, since large fibroid tumors of the womb occasionally spontaneously melt away and disappear, the septa of an occluded tube might also become absorbed and the tubal lumen reopen. Dr. Price cast doubts upon this fact, and said that he had never seen a fibroid tumor disappear. But many other gynecologists have, among them Mr. Tait, who reports several cases of spontaneous absorption, or of rapid absorption and total disappearance after merely an exploratory incision. I also have seen uterine fibroids spontaneously disappear, and I have had one case occurring at my private hospital, in which, after an exploratory incision, the tumor, fully as large as a child's head and immovably fixed by adhesions, rapidly and wholly melted away. In another case of exploratory incision performed at the University Hospital, a large adherent fibroid lessened in size astonishingly, but did not wholly disappear. Neither is the integrity of the pavilion of the tube necessary for conception, as some of Dr. Polk's cases positively prove.

To show the large natural mortality of chronic disease of the appendages which I disputed, Dr. Noble gave only three fatal cases, and Dr. Price not many more out of the hundreds of cases which they had met with. But the latter gentleman adduced as an argument the closure of Queen Charlotte's Hospital on account of a fatal epidemic of puerperal disease. Now, I cannot see what bearing this fact has on the question at issue. My paper acknowledged the high death-rate of acute salpingitis, and it dealt only with those cases which had become chronic, while

those in Queen Charlotte's Hospital were acute cases of puerperal salpingitis, which is an extremely fatal disorder.

There is no question, as one gentleman contended, that some cases after castration have increased sexual desire. I admitted this in my paper, but I also said that it was of brief existence, usually ceasing after a few months.

While I have had, in common with other operators, insanity follow castration, yet I also have cured insanity by the removal of the ovaries, and I mention the cases in which it should be resorted to. In carefully-selected cases I also have cured epilepsy. One case never had a fit after her healthy ovaries were removed. But in these cases the attacks were limited to the monthly periods. It is in menstrual insanity and in menstrual epilepsy that castration cures.

Reference has been made to the continuance of menstruation after the removal of the ovaries. This I have repeatedly seen, but in my experience this metrostaxis usually ceases within the year. In one of my cases, however, it lasted three years as a menorrhagia, and then wholly ceased long before the climacteric age.

Dr. Hoffmann asks how it is possible for an ovary crippled by an abscess to develop ova. But any organ may be diseased and yet have a portion sufficiently healthy to carry on its functions. I exhibited in this hall a very large cyst of the kidney which I had successfully removed, and, although the cyst was much larger than the adult head, there was left a small portion of healthy renal tissue. It appears that a very small portion of healthy ovarian tissue is sufficient to form and cast off healthy ova. Atlee's two remarkable cases, referred to in my paper, are in print. In each one an ovary had been removed years before; then the remaining ovary became cystic and had to be tapped, yet after these operations conception and pregnancy took

place. After parturition the cystic ovary was removed. I also adduced Robertson's case, in which he removed both ovaries, yet he must have left unwittingly, as he says, a small piece of ovarian tissue in one stump, for the woman subsequently became pregnant.

With reference to the use of salts to clear up a diagnosis, I am in accord with Dr. M. Price. But my cases of pregnancy after disease of both appendages were long under observation and had been repeatedly purged, so that I could not have mistaken hardened faeces for tubal disease. Besides, they had all the subjective symptoms of diseased tubes, which cannot be said of any case of hardened faeces. But why need any doubt be cast upon the accuracy of my diagnosis, since Dr. Baer related his most remarkable and unimpeachable case of pregnancy in a woman whose diseased and greatly damaged appendages he had seen and handled before her conception? His case throws into the shade every one that I have adduced to prove that diseased ovaries may secrete healthy ova, and that occluded tubes may reopen and permit the ova to descend into the womb.

Nor am I carried away and led astray, as has been intimated, by emotion or by sentiment in endeavoring to save the uterine appendages. I know their value, and, when they are not greatly diseased, I try to save them. I am not always successful in this, and I frequently have to perform the radical operation, but I do it always with great regret, for ovaries once removed can never be replaced.

It has been retorted on me that I have changed my views from those expressed by me in this hall years ago. I acknowledge the impeachment, but I hope that I am not yet too old to learn or too old to unlearn.

Adjourned.

HARRIS A. SLOCUM, M.D.,

Secretary.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

ORIGINAL COMMUNICATIONS.

Excision of the Hip-joint in Tubercular Disease.¹

BY B. MERRILL RICKETTS, M.D.,

CINCINNATI, O.

THE practice of excision of the hip-joint does not date back one hundred years, although Schlicting, in 1742, removed pieces of diseased bone from the human hip-joint. Experiments on the lower animals were begun by Charles White, of Manchester, England, in 1770, followed sixteen years later by Vermandois and Chaussier, in 1795. Schmalz, of Pirna, conceived the idea of making a double exsection of the head of the femur upon one of his patients in 1817, but after making his incisions he found that the head of the femur had already been removed by the disease, and consequently he could not claim to be the first to make the operation. Anthony White, of London, seems to have

been the first to have made an excision of the femur upon a living human being, a child. Huston made one in 1823, Oppenheim one in 1829, and Lentin one in 1832. Textor made one in each of the years 1834, 1835, 1839 and 1845; the one in 1845 lived. It was this year, 1845, that Ferguson began his renowned series, and up to 1855 he had made four operations with three successes. The operation now, 1855, became general, there having been performed forty-one operations up to 1860 in spite of the opposition of Syme. Roux, 1847, was the first to operate in France, and the patient died, and the operation does not seem to have again been made in that country until 1863, when Beckel operated with success. Ollier, of Lyons, made his first and

¹ A paper read before the Cincinnati Academy of Medicine, November 20, 1893.

successful operation in 1868. This was the year that Bonnet's successful career began. Orthopædics was little practised until the introduction of antiseptics, when the operations rapidly multiplied under the Ray Barton method and the Adam's section of the neck subtrochanteric. Volkman began on irreducible luxations in 1878, while Margery, in 1885, endeavored to remedy congenital luxation by resection of the head of the femur.

Charles T. Poor¹ reports sixty-five cases of excision of the hip-joint out of sixty-seven, from 3 to 15 years of age, occurring in hospital practice from 1873 to 1893. Whether this is in St. Mary's Free Hospital alone or not he does not say. There were five erosions; eight trephines of the trochanter major; eleven, the central cavity of the femur was cleaned (abscess in all); fifty-one, the joint was entered over or behind the trochanter major; in fifteen cases the anterior incision on outer side of crural nerve below one-half an inch internally to anterior superior spine of ilium. In sixty-four cases only one joint was involved, and in three both were involved; thirty-six, the head and neck were removed; twenty-four, made below trochanter major; seven, head alone was removed; thirty six cases, extensive bone lesion; thirty-one, confined to head alone; in ten cases the end of the bone was afterward removed; thirty-five cases, old sinuses curetted owing to tubercular granulations; five erosions performed afterward. Thirty-two were cured, twenty-five died, three returned, two not improved, and five not accounted for.

Ollier gives three principal reasons for the joint being entered: First, acute suppuration, bony or synovial, origin due to any cause. Second, acute tubercular suppuration. Third, arthritis, non suppurative, but occasioning great pain or deformities by other means. In number one and two resection is the vital indication. Number three not so important; let alone except to walk orthopædically. Do not remove the head for simple synovial fluid or marginal osteitis, or osteo-myelitis of head of bone, but in cocco-femoral articulations, involved by suppuration, the head should always be removed.

The views which I hold concerning hip-joint excisions might be considered radical, and, although I may be classed among the younger surgeons, I feel convinced through my own experience and that of others that even exploratory incisions into the hip-joint are as justifiable as the exploratory incisions into the abdomen of any other cavity. I am also convinced that the indications, as suggested by Ollier, for the operations are the most rational that I have seen. These conditions alone are sufficient to induce the most timid operator to discharge his duty both to himself and patient. It is not a question as to which one of the three stages of hip disease exists. Operative procedures in either of them may be demanded, especially so in the second and third stages; and I might say it is demanded in 90 per cent. of cases in the first stage. If we have evidence that the hip-joint or any other joint is diseased, it is our duty to determine as far as possible to what extent the disease exists. Unfortunately, in hip-joint diseases, as in most other diseases, the primary stage is overlooked. This is the most

¹ New York Medical Journal, April 23, 1892.

important time, for in the first stage operative procedure of any kind is most likely to result in good. I do not believe that there is 3 per cent. of tubercular hip-joints that do not result in more or less ankylosis. I am quite sure that no more than 6 per cent. of exploratory incisions in the primary stage would result in ankylosis; I mean, of course, when performed aseptically. If the disease should, after exploratory incision, prove not to be tuberculous, primary union is to be expected. If it should be tuberculous, primary union could not under any circumstances be expected. It is a great question as to the amount of destruction that is to take place when the head of the femur has become diseased even to the slightest degree. The earlier tubercular foci can be removed from the head, neck or shaft of the femur, the shorter will be the duration of the disease and the less the deformity and amount of ankylosis. Even at the present time the majority of operators in this and foreign countries delay any direct surgical operation until the formation of fistulæ. This, to my mind, is a dreadful state of affairs, and I would most surely condemn such procrastination. Operations under these circumstances can offer but little good as compared to operations in the earlier stages. By this time the patient has become subjected to the various tubercular sequelæ, such as pulmonary infection, amyloid degeneration, etc. The patient has become practically worn out from the pain, loss of sleep, loss of appetite and general infection, besides having, from necessity, been compelled to do without sunshine, out-door exercise and fresh air. Do anything within

reason before the second stages of hip-joint disease that will enable a patient to have these advantages. If these cases are allowed to reach the third stage, years are required for a complete recovery if they should live.

If the diseased tissue is removed early, the patient can be allowed to run about *ad libitum* from almost the beginning.

I presented to this Society last spring the head, neck and greater trochanter removed from a boy 5½ years old. That specimen fully demonstrated what exists in what might be called the first stage of tubercular hip disease. I do not believe that there has been any good results following the injection of iodoform into a hip-joint where tuberculosis exists, as in this case. As the majority of cases die sooner or later, perhaps before the age of 25, I do not believe it is wise to subject them to the confinement that must necessarily be in placing the patients in plaster-of-Paris and the various kinds of braces that flail-joint may be avoided, because flail-joint may be the result even when fixation by any means has been resorted to. I do not believe the number of flail-joints is increased by not subjecting the patient to this plan of treatment. It is deplorable that the upper epiphysis of the femur should be removed during a surgical operation; it is surely equally deplorable for life to be destroyed by disease. No man is supposed to remove more than the diseased portion of a bone; that would be criminal, and the operator would subject himself to suit for malpractice. It is supposed that the operator knows abnormal tissue from normal tissue, and unless he does he has no right to do this or any other

kind of surgery. Therefore, I maintain that the shortening is no greater in cases that have been operated upon than in cases that have not been operated upon, cases that have been allowed to run their course. Some maintain that the ankylosis as the result of hip-joint disease is different and more substantial than the ankylosis following operative cases. However, be this as it may, I feel that the end justifies the means. I am quite sure that the results in the cases that have come under my observation bear

me out in this statement. While the operation of trephining the trochanter and neck has been done, I am sceptical as to the indications for such a procedure. It is absolutely impossible for any man to determine the locality of tubercular foci, especially when they exist within the substance of the bone. I would add that there are three conditions which would permit me to operate: First, to get rid of the disease; second, to avoid infection; third, to relieve pain when other measures have failed.

SOCIETY PROCEEDINGS.

New York Academy of Medicine—Section on Pædiatrics.

DR. HENRY D. CHAPIN, CHAIRMAN.

Meeting of December 14, 1893.

DR. HENRY KOPLIK presented two rare cases of laryngeal spasm. The first was healthy until 5 weeks of age, when he had pneumonia. He was seized with attacks in which the breathing was difficult and harsh, the legs were drawn up, the lips became cyanotic. The attack would then subside, and all symptoms disappear; this lasted for two weeks; the child was left with a peculiar crowing sound with each inspiration; it was not loud and would be readily overlooked; it was less marked when crying, and was less marked with some inspirations than others; the child showed a mild degree of rickets; the post-cervical glands were enlarged;

other glandular tissues were normal. The second patient was a sallow, poorly-nourished child, who had been fairly well till three and one-half months; he had been ill for four weeks; the respiration was somewhat similar to that of the first case; post-cervical glands were enlarged; there was distinct rickets, but no cranio-tabes.

Dr. Koplik had seen a third case in a child suffering from what he believed to be congenital rickets. In reply to a question of Dr. Jacobi, he said that he attributed the disorder to spasms of the arytaenoid muscle which would bring the arytaenoid muscle together, thus narrowing the rima

posteriorly. One explanation of such disorders was that there might be irritation of the cortex by some rachitic change on the inside of the cranial bone. Unlike laryngismus stridulus, the peculiar sounds disappeared when crying. In one case improvement occurred under treatment by bromides, in the others it had failed. These children were taking phosphorus in doses $\frac{1}{120}$ grain, twice a day.

Dr. J. Lewis Smith said that he had seen a case of congenital rickets. The child died at birth, and Dr. Delafield, who made the autopsy, coincided with his opinion.

Dr. Koplik, in reply to Dr. Dillon Brown, said that there was no abnormal condition in the naso-pharynx in these cases.

Dr. J. Lewis Smith reported a case of bad result from vaccination. At the end of one week the sore appeared perfectly normal. After this the child became feverish; the temperature rose to 105° ; the arm was much swollen, and an abscess formed above the right ankle; the child died at the end of three weeks from septicæmia. Such cases had been very rare in his experience. He believed the infection was subsequent to the vaccination, and was engrafted upon it.

Dr. R. G. Freeman reported briefly the autopsy upon this case. An abscess was found at the lower end of the right tibia with numerous other evidences of septicæmia. He believed that the infection had been introduced subsequent to the vaccination. Infection, he said, was due to the vaccination direct. He strongly urged the importance of protecting the sore. It is the only open wound made by the surgeon which he does not protect by a dressing

Dr. J. H. Fruitnight reported a case of tetanus, which followed on the fifth day after vaccination, in a boy who was employed in a market garden.

The subject for discussion was :

SCARLET FEVER.

Dr. Wm. H. Park read a paper entitled: "Bacteriology: The Present Status of our Knowledge."

Although we know from the peculiarities of the disease that some causative germ must exist, we have been, as yet, unable with certainty to identify it. Much study has been devoted to the subject, and numerous germs have been found in the throat. They are largely streptococci. These germs have also been found in the blood, and it was for a time thought that they might be proved to be the cause of the disease. Such proof, however, has not been produced. The evidence, on the other hand, is strong that, although present in large numbers, they do not cause the disease. There is no question, however, that they do account for many of the serious complications and irregularities. The writer has made cultures of the germs found in the throats of fifty cases of scarlet fever, presenting all shades of the disease. All these cultures contained very numerous colonies of streptococci, growing in long twisted chains, which far outnumbered all other germs. Since the belief is general that the desquamating skin is one of the chief causes of the contagion, numerous cultures were made from the flakes of skin. No growth of streptococci appeared. Cultures made from the finger-blood were also negative. It must be remembered

that streptococci are always found in greater or less numbers in the healthy throat. In scarlet fever, however, they are in much larger numbers, but apparently the same varieties. The mucous membranes are in such condition in this disease that the germs present may, and probably do, cause many of the complications and serious symptoms.

Dr. John Winters Brennan read a paper on "State and Municipal Control of Infectious and Contagious Diseases."

Several diseases have been proved by the researches of recent years to be communicable. Notable among these is tuberculosis. Steps are being taken by numerous boards of health to place these diseases among those to be reported by physicians. It is important that the modern understanding of certain terms should be fully appreciated. By infectious disease is now meant one caused by living germs. It may or may not be contagious. It may not be communicated from one person to another, as malaria. A new term should be used, and no better term than communicable can be employed. This has already been used for several years in Michigan by the Board of Health. The term contagious should only be applied to those disorders contracted by personal contact. The regulation of infectious diseases lies with the State, not with the national government. The State has been in the habit of relegating its power to local or municipal boards of health. The real power, however, lies with the State. The powers of city boards of health can at any time be abridged by State enactment. There is an urgent need in all the cities of this country of hos-

pitals for the treatment of contagious diseases. But one hospital in New York is devoted to that purpose, and that is far smaller than it should be. The time is probably not far distant when forcible removal of contagious diseases will be more frequently practised.

Professor William H. Thompson said that for some time he had taught that infectious diseases were those caused by living organisms. He divides these into communicable and non-communicable. Malaria is of the latter variety, which is derived from a place not from a person. Communicable diseases may be contagious in the old sense of the term, and in the sense in which the laity use it. If this is not understood, great cruelties will certainly be inflicted upon the unfortunates suffering from this and from other non-contagious diseases.

Dr. A. Jacobi spoke at considerable length of

TREATMENT.

A mild case of scarlet fever must not be combated, but be guided. The temperature of the room must not be high; it better not be over 70° F.; ventilation should be strictly enforced without causing drafts; the body of the child may be rubbed with oil each day; a dose of calomel is to be recommended at the outset of every case; free clearing of the bowel will do much to prevent auto-infection; the diet should be milk or broth; the child should be kept in bed for many days even in mild cases; the question of administering an antipyretic is an important one; a sudden elevation of temperature is never borne well; the sudden rise of temperature on the first day of scarlet

fever or pneumonia frequently causes more serious symptoms than a higher temperature later; it is quite possible that an antipyretic may be indicated during the first day; it should not be acetanilide or even phenacetine, though the latter is the safer of the two; a warm bath is just as effectual and far safer, or sponging with alcohol and warm water; quinine is not indicated, for the antipyretic dose is too large to be tolerated by the stomach; when the skin is dry and hot, a few doses of aconite may be required.

Physicians are frequently criticised for giving too much medicine. There is, he believes, more cause for criticism for not giving sufficient medicine at the proper time. Many cases of scarlet fever have died through the sin of omission on the part of the physician. Certain severe cases are overcome early in the attack and are soon beyond the aid of any medicine. It is an important principle that every case of scarlet fever should be kept alive, if possible, until the disease has run its course. Food and stimulants are therefore urgently demanded. Alcohol, digitalis, strychnia and camphor all find their place in this disease. Camphor is especially valuable. It may be given in doses of two to eight grains per day. If the stomach rejects everything, it may be given hypodermically, dissolved in sweet almond oil, one part to four. The throat ought to be considered even in comparatively mild cases. Unless the child is old enough to open the mouth and undergo treatment calmly, the throat should not be swabbed. It is the height of impropriety to treat a throat in such a way that healthy mucous membrane will be injured and an opportunity for the spread of

membrane presented. It is therefore very improper to swab the throat of a young struggling child. The throat can be reached through the nose, not with the spray, which is insufficient, but with the syringe. A mild solution, saline or boric acid, should be used. Strong antiseptic solutions should be avoided. Enlarged glands are very obstinate and dangerous. When much enlarged, they are the cause of the death of the child and should be treated vigorously. Incision is indicated even if but little pus is obtained. No anæsthetic should be administered. The incision should be packed with salicylic gauze. Carbolic acid or iodine may be absorbed.

The younger the child the less the danger of ear complication. The joints are sometimes involved by so-called rheumatism. This occurs usually during the first week and is relieved by salicylate of soda. Cardiac disorders are sometimes myocardial and not endocardial. Digitalis should not be administered. Cerebral intoxication sometimes occurs, but true meningitis is less common. It is due to streptococci, which reach the brain through the throat. The road is short and direct. For meningitis itself there is no curative treatment. The preventive treatment is very important. Every child should be kept in as good condition as possible. Adenoid growths and enlarged tonsils should be removed, for they present gaping mouths for the absorption of germs. When a child is taken ill with scarlet fever, the danger of meningitis alone would indicate frequent cleansing of the throat.

It is also important to prevent nephritis. It will sometime occur with a child on a milk diet carefully

watched in every regard. The child should be kept in bed for three or four weeks, and not permitted to leave the room for forty days. At the outset of the disease calomel should be given, but not digitalis, which is a dangerous drug in acute inflammations of the kidneys. Albuminuria without dropsy is a serious disease. Ordinarily mild

cases take care of themselves and require but little treatment. Chronic cases are very discouraging. They are best treated by bi-chloride or iodide. These drugs may be alternated, each being given for a week at a time, the treatment being kept up for months at a time.

ABSTRACTS FROM CURRENT LITERATURE.

Curetting of the Trachea in Diphtheria.

SCUDDER (*Boston Medical and Surgical Journal*, November 9, 1893) reports a case of diphtheria in which, after tracheotomy had been performed, dyspnœa became so marked that, after all efforts to remove the membranes by the usual methods had failed, he had to resort to a dull wire intra-uterine curette, which was carried down through the tracheotomy wound to the bifurcation of the trachea, and its whole circumference

systematically and thoroughly curetted. As the curetting continued, pieces of membrane were withdrawn through the trachea. The hæmorrhage was slight. The relief to the dyspnœa was immediate. The patient recovered, and is well and healthy two years afterwards. This author feels that this method of curetting for dyspnœa may be of great service as a last resort where other methods have failed.

The Orthopædic Treatment of Malpositions in Coxalgia.

LAINTON (*Gaz. des Hôp.*, November 11, 1893) summarizes his method of treatment according to the indications as follows: During the period of evolution of a tuberculous coxitis, since the contraction of muscles is then the only factor in the production of the malposition, the simplest means should be used to correct it, which he considers to be forcible straightening during narcosis.

When, however, the coxalgia is cured, or is at least in the retrogressive stage, the bad position is due to many factors, muscular contraction, dislocation and changes in the articular surfaces, now ankylosed. It is in this case necessary to do an osteoclasis or osteotomy of the femur. In very exceptional cases recourse must be had to orthopædic resection of the thigh.

The Prognosis of Injuries Received in Infancy.

THE difficulty of prognosis in these cases, especially as regards traumas of the extremities, is well illustrated by a case reported by CH. FÉRÉ (*Revue de Chirurg.*, No. 10, 1893). The case was one of a burn of the hand. At the time of the accident the child was 4 months old. The burn, though limited, included the entire back of the hand with the exception of the thumb. The patient at the age of 45 showed an atrophy of the entire hand including the thumb, which one would have said

would escape the atrophic change. The author draws in his *résumé* from this fact the conclusion, important from a prognostic point of view, that traumatic lesions occurring in infancy can cause in the limb an arrest of development capable of extending to parts which were not affected by the injury. There is, of course, some doubt concerning the cause of the arrest, as it could not be determined what treatment had been used, and this may have occasioned the extension of the arrest.

The Treatment of Congenital Omphalocele.

BERGER (*Rev. de Chir.*, October 10, 1893) advises in all cases of congenital umbilical hernia immediate operation, within two or three days after the birth of the infant, or even twenty-four hours after birth, if the child is strong, healthy and vigorous. The only delay necessary is that required for sufficient antiseptic preparation for the operation, and the getting of assistance. The patient may meanwhile be dressed with an antiseptic dressing and compress of cotton over the umbilicus. The method he advises is a formal laparotomy; the cut being carried through entirely normal and well developed tissues. By this method the hernial sac is removed in its entirety, that portion to which the contents are adherent being cut away and replaced within the abdomen; the sides of the wound are then united by three separate layers of sutures, as in an ordinary laparotomy. The use of chloroform in these cases, the

author believes, is a necessity, and is no more harmful than in adult life.

The contra-indications to this method are such cases in which the arrest of development has been so great that it would be impossible to close, even by a plastic operation, the opening in the abdominal wall, or those cases of children born before term.

The concomitant occurrence of other defects in development, if they do not endanger the life of the patient, do not contra-indicate this operation, nor do such conditions if they are operable, as, for instance, atresia ani; but the result of that operation should be awaited. He reports two successful cases of operation: The first, thirty hours after the birth of the child; the second was operated upon over seventy hours after birth. In both there were adhesions, and both were irreducible.

Diabetes in Infancy.

DUFLOQ and DAUCHEZ (*Revue de Médecine*, 1893, No. 6, page 546) report a rare case of diabetes in childhood. The patient was a well-developed child, of good parentage, 1½ years old. Suddenly it became morose, dejected and grew thin with loss of appetite. Two weeks later coma appeared, the patient sinking under it

in two hours' time. The urine found in its clothing was examined and found to contain a large amount of sugar. These authors, in their researches through the literature on this subject, have been able to find but two other cases reported, occurring in children under two years of age.

Renal Surgery in Childhood.

ALDIBERT (*Rev. des Mal. de l'Enfance*, October and November, 1893) has collected from medical literature 111 cases of operation in renal disease, which he summarizes separately, and from them derives the following conclusions as regards operation: (1) That the surgical kidney exists in childhood as in adult life, and that its

clinical symptomatology in both periods of life is identical, except for a few slight differences; (2) that it justifies the same operative intervention, nephrorraphy and nephrectomy being well borne even in the earliest years. Malignant tumors alone present a gravity that demands the expectant consideration of the surgeon.

The Treatment of Talipes Varus, or Congenital Club-foot.

By a concise *résumé* of over 300 cases of operation in which his results have been very favorable, E. VINCENT (*Arch. prov. de Chir.*, T. 11, Nos. 3-5, 1893) supports the following method of operation, in opposition to the open or more sanguinary methods. This operation he does not perform before the third or fourth year, but advises its use in even well-grown youths. The method consists in the bending or breaking of the tissues and moulding of the foot into the proper shape. He always cuts the tendo-Achillis and plantar fascias subcutaneously before attempting the bending of the foot. If a tenotomy of the plantar fascia does not suffice, he divides sub-

cutaneously all the resisting structures on the inner side and sole of the foot. If hand force is not sufficient he uses the osteoclast of Robin-Mollière.

He does not believe that the bones are broken, but that there is a bending, with rupture of the bands and structures surrounding the bones. The deformity should be over-corrected. The dressing should be of plaster-of-Paris, and the patient should wear for some years after operation an orthopædic shoe. In those cases where correction of the foot will not suffice, he advises a supra-malleolar osteoclasis of the tibia and fibula.

A Case of Diphtheritic Hemiplegia Occurring in a Child of 8 Years.

AMONG the sequelæ following diphtheria, those of the nervous system, coming on after the subsidence of acute symptoms, are not among the most seldom seen, but it is only within the past few years that the researches of Roux and Yersin, Brieger and Fränkel, Tangl and others have shown the intimate connection between these sequelæ and the diphtheritic poison.

J. DONATH (*Neurol. Cent'bl.*, July, 1893) reports a case in which a child recovering from an attack of diphtheria acquired on the third day of convalescence a right-sided hemiplegia with involvement of the face,

and also an aphasia. The aphasia and paralysis began to disappear at the end of the third week, but the recovery was only partial and progress was slow. There remained a paralytic condition of the right thigh with contracture of the muscles. The treatment consisted in the use of the farado-galvanization of the extremities and strychnia. At the end of five months the patient could walk and had moderate use of the right arm, but there remained a contracture of the leg. The existence for five months of this typical hemiplegia leaves no doubt in the mind of the author that there was cerebral hæmorrhage.

The Operative Treatment of Congenital Hip-joint Dislocation.

HOFFA, of Würzburg (*Munch. Med. Woch.*, No. 18, 1893) describes a new and strikingly efficient method of correcting this deformity, which he has both studied and practised for the past three years. It differs from other methods in that, after the ordinary Langenbeck incision, the acetabulum is deepened or restored to the normal, the head of the femur shaped to fit it, if necessary, and replaced, and the soft parts cut to allow the replacement in a correct position. This method is now preferred by König to his own, and Lorenz, of Vienna (*vid. Wien. klin. Woch.*), has adopted it with certain modifications. The method is described as follows: (1) The building anew or deepening of the acetabulum. The author saw that in the majority of congenital cases there was a filling up or the

absence of this cavity. Its restoration, even when altogether absent, to its normal condition is not difficult. The margin of the new-formed acetabulum must be sharp in order to hold the head firmly. Hoffa devised for making this a bayonet-shaped curved curette. A trephine has been used. It should be noted that at the normal position of the acetabulum the bone is thickened, and this is requisite in a newly-formed acetabulum. (2) The adaptation of the head of the femur is sometimes necessary when it is changed. (3) The cutting of the contracted soft parts. This is of the highest importance. It is natural for muscles, shortened by the dislocation, to contract, and thus, with the shortened fasciæ and ligaments, to hinder the proper natural reposition of the joint. The contraction of these soft

parts increases with the age of the child, and is markedly present at 3 years of age. Thus it happens that the longer operation is delayed the more structures must be cut through, and, therefore, the earlier the operation the less severe it becomes. In the first year the sub-periosteal releasing of the femur's head is sufficient. In 10-year-old children (*a*) the soft parts must be forced from the joint to the spina subcutaneously; (*b*) the adductors and the muscles arising from the tuber ischii must be severed. It is then possible to re-

place the head of the femur. It is important to remove the capsule and the ligamentum teres, which form an interposition between the head and the acetabulum. The author allows the wound to remain open, sometimes using a secondary suture, and fixes the joint either in plaster or extension bandages, or in a fixation bed. After five weeks this is removed and the patient is allowed to move about with a splint on. He has had the best results both in unilateral and bilateral cases.

Some Points in the Operative Treatment of Severe Hare-lip.

THE following points are considered to be essential to a well-performed operation for hare-lip by THOMAS (*The Birm. Med. Rev.*, September, 1893), with especial reference to severe cases: (1) Symmetry of the nostrils; (2) a perfect muco-cutaneous margin; (3) absence of any notch either at the nostrils or the lip; (4) as few cicatricial marks as possible. In order to attain these results, he counsels operation in severe cases as follows: First calling attention to the anatomy of the parts, with especial reference to the cartilages and their abnormal position, he declares himself in favor of sacrificing the projecting inter-maxillary where it projects, or at least more or less completely removing it. In every case, however, every bit of skin and as much of the mucous membrane as possible should be detached from the pre-maxillary mass before cutting it away. In severe cases of hare-lip, the cartilage which usually forms the floor of the nostril is bent downward and retained in the continuation of the side of the nostril.

In order to bring this into its normal position, this author, after freely separating the cheek and nostril from the facial bone to prevent tension, inserts the point of his scalpel at the lower curvature of the ala of the nose below the cartilage, and with the blade directed downward cuts a small flap, which must include the termination of the cartilage. When this flap is turned upward and inward, two raw surfaces are produced, one of the flap itself and the other of the lip from which it was cut. Two corresponding flaps are made, one on the outside of the base of the columella, the other below and continuous with it from the upper part of the inner margin of the cleft. The flap and the corresponding surfaces are applied to one another and stitched. He usually treats these cases by successive operations, not completing at one sitting, but allowing perfect healing to take place before performing the second operation, which is then one for a simple hare-lip.

The Treatment of Club-foot.

IN an interesting article, in which the experience of forty years is given, TAPPERT (*Munchener Med. Wochen.*, No. 18, 1893) describes his method of operating, and certain splints and their uses. His method is mostly subcutaneous and by the use of the tenotome. His experience has taught him that in all cases, at least those of exaggerated type, the tibialis anticus is shortened, and he begins most of his operations by the section of this tendon. This is followed a few days later by the section of the plantar aponeurosis and the tendo-Achillis. In exceptional cases he finds it necessary to divide the halucis, and sometimes, through an open wound, the

tibialis posticus. He does not make his correction all at once, but gradually, renewing the bandages every eight days, increasing, however, the interval in the later periods. The splint is of plaster-of-Paris, with a foot-piece of pasteboard, and strips of this material used to strengthen the bandage, which extends to the knee. In children, 1 to 2 years old, the foot gains the correct position in six to eight weeks, but it must then be over-corrected. After this a metal splint is used, constantly worn and over-correcting when the foot is in rest. In congenital cases the author operates in the seventh to the twelfth month.

The Significance of Diphtheritic Membrane as Regards Treatment.

AFTER reviewing the pathological processes which mark the difference so plainly between the pseudo and the true membrane of diphtheria, and explaining them by their characteristic pathological formative processes, M. S. ÖRTEL (*Ber. klin. Woch.*, Nos. 13 and 14, 1893) says that for the practitioner these stages of development have a peculiar significance, and enable him to judge of the development, and the means necessary at stated intervals for overcoming the disease. The superficially developed pseudo-membrane is accessible. It requires local treatment; gargles and paintings are useless, sometimes harmful. The author uses entirely the carbolic steam spray, a 2 to 5 per cent. solution, every two hours for three to five minutes at a time, accord-

ing to the severity of the case. Under careful supervision the author has never seen intoxication symptoms. This treatment is sufficient for the superficial pseudo-membrane, but avails little in the true diphtheritic. The spread of the true membrane and its infection in the mouth must be guarded against, but he warns especially against all forms of cauterization or caustics, and galvano-caustic in particular. He recommends internal therapy alone in cases of true diphtheria, and argues that the anatomico-pathological ætiology and progress of the disease beneath the epithelium make it a general and not a local disease, and not amenable to local antiseptic treatment, except to prevent extraneous infection.

The Treatment of Congenital Fistula of the Neck.

ALTHOUGH this form of fistula is a comparatively rare one, or is, at least, supposed to be so, SCHLANGE (*Arch. für klin. Chir.*, Band 46, Heft II, 1893) reports the following two cases, and states that numbers of them are operated on at the Royal Clinic in Berlin. In the first case the fistulous opening lay in the lower third of the neck between the sterno-cleido-mastoid and the trachea. It entered the pharynx near the tonsil. It was easily removed and healing was prompt. The histological formation of such fistulæ is of interest because they vary so markedly. It was lined with cylindrical epithelium upon a lympho-dermoid basement structure, this being surrounded by a layer of longitudinal muscular fibres. In the lympho-dermoid tissue were numerous follicles similar to those of the intestinal mucous membrane. A more common form of this fistula is the median; the healing in these cases is not so easily accomplished. Their course is generally to the hyoid bone, and they appear to end in its periosteum. This is generally not the case, and cases operated on on

this basis usually reopen. The fistula does not end at the hyoid bone, but continues either passing around it, or sometimes, by a minute opening through it, into the mouth. It is generally necessary to resect the bone, and then the further course of the fistula will come into view. This operation the author can commend, as he has never seen any injury occasioned by it.

The second case reported was of this nature: Following down the course of the fistulous tract he came upon a tumor the size of a cherry, closely united to the periosteum of the hyoid bone. He resected the bone and a second tumor of equal size was disclosed, which was united to the periosteum of that side and from which a fistulous process extended to the root of the tongue. The cut surface of these tumors had the appearance of a fibroma of the mamma. The microscopical examination showed them to be fibromatous in structure, and to contain spaces lined with pavement epithelium. The radical treatment by extirpation is the only one recommended.

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ORIGINAL COMMUNICATIONS.

The First American Symphyseotomy.¹

BY ROBERT P. HARRIS, M.D.,

PHILADELPHIA.

UNTIL late in October last we were under the impression that the first symphyseotomy on this side of the Atlantic was performed by Professor Charles Jewett, of Brooklyn, on September 30, 1892, but it was then discovered that the credit belonged to Dr. William Thomas Coggin, now of Athens, Georgia, who operated on Freedman, Northeast Alabama, on March 12, 1892, more than six months before, with entire success; his residence at that time being in Keener, in the same mining region. Learning of Dr. Coggin's case at the time indicated, I opened a correspondence with him at once; have had ten letters from him since November 1, 1893; have secured a report of his operation

for the *American Journal of Obstetrics*, for which it is now in press; and am here prepared to do him credit for the initial operation in this hemisphere. I should feel inclined to censure him for withholding his case from the profession for so long a period, but for the fact, shown in his first letter to me (November 2, 1893), that he was under an impression that as many as five operations had antedated his in this country. Had he known, as he does now, that he was the pioneer operator, we should, no doubt, have had an early report, and he would have been of influence in introducing the scheme to the favorable acceptance of American obstetricians.

The record of Dr. Coggin's case shows that Drs. Pinard and Varnier, of Paris, had nothing whatever to do

¹ Read before the Philadelphia Obstetrical Society, January 4, 1894.

with inducing him to perform the operation, thirty-six days after the initial trial of the former, as he had not heard of Pinard's case, or of their advocacy of the method. He was in Heidelberg in 1890, where he heard, from an Italian physician, an account of the remarkable successes under the operation in Naples, and received one of Professor Morisani's papers on the subject. He then decided to prefer symphyseotomy to craniotomy, whenever a case should come under his care in which one or the other should be presented as the alternative; and it was thus that he became the second to perform the operation after its exit from Italy. Had he been in a large city, he might have met with a proper subject much sooner, and have antedated Professor Pinard in his work, as he had in his acceptance of the applicability of the method. Dr. Coggin was a graduate in medicine of eight years' standing when he went to Germany, and prepared by experience to value a plan of obstetrics that opened to him a way of avoiding the objectionable one of craniotomy.

It is well known that no one in Europe, except in Italy, performed a symphyseotomy from 1865 to 1892, although from 1886 to 1892 there was enough in the measure of success attained to warrant its introduction into other countries. A mortality of $5\frac{1}{2}$ per cent., we should suppose, would have secured imitators at a much earlier period, but for the fact that the Italians made but little boast of their work, and appeared to be indifferent upon the question of breaking up the old and deep-seated prejudice against the operation. Although aseptic and antiseptic measures had

effected a revolution in results, it was not until a long record of successful cases had been collectively reported that the opposition of a century was made to give way. Having been in correspondence with the active advocates of symphyseotomy since the year 1882, I can understand the effect of the revelation of results that was made to certain Parisian obstetrical writers and observers, in Naples and Paris, during the winter of 1891-92. By that time there was such an array of facts in favor of the operation that it was only requisite to make them known, to excite attention; for up to January 1, 1892, there had been in the preceding seven years thirty-seven Italian operations, with two women and three children lost. These cases were in order Nos. 11 and 24; the first of which had been in labor ninety-six hours, and the second, several days; Case 11 died of septicæmia, and Case 24 of metrorrhonitis.

Dr. Coggin operated upon the wife of a miner, a tall and apparently well-made primipara, 23 years old, and five feet and seven inches high, who had been fifteen and a half hours in labor when he was called in. He tried to deliver by the forceps, but found the pelvis too much contracted to admit the passage of the instrument, being of the *justo-minor* type, and computed to be one-third smaller than the average. He opened the symphysis after sixteen hours' labor; applied the forceps; and in delivering the fœtus, which proved to be a male of eleven and three-quarters pounds' weight, noted that the pubic bones became separated two and three-quarters inches. There was no injury produced by the extraction of the

child, either to the sacro-iliac synchondrosis or to the soft parts.

Under a proper restraining apparatus the pubes readily united: there was no lameness, and the boy did well, as his unusually large size now indicates. There have now been thirty-five operations in the United States, and this woman was among the earliest to be operated upon, and bore the heaviest child but one of the thirty-five, the highest in weight being one of twelve pounds. Of the children, twenty-four were males and eleven females, and the average weight of thirty-three of them was eight pounds. This average is the

less, 1; 7 to 12 hours, 5; 13 to 24 hours, 15; 25 to 36 hours, 2; 37 to 50 hours, 6; 51 to 62 hours, 1; 63 to 76 hours, 2; and 89 hours, 1. The four fatal cases were in labor respectively 16, 20, 25, and 72 hours. Of the last 19 cases, 1 woman and 5 children were lost.

It is of interest to note the order and date of introduction of the operation into the several countries since its exit from Italy.

The record of the year 1892 has been carefully collected by Dr. Franz L. Neugebauer, of Warsaw; Professor Charpentier, of Paris; Dr. Francesco Caruso, of Naples; and the writer,

NO.	COUNTRY.	LOCALITY.	OPERATOR.	DATE OF INTRODUCTION.	RESULT TO WOMAN	RESULT TO CHILD.
1	France.	Paris.	Prof. Adolphe Pinard.	February 4, 1892.	Recovered.	Died.
2	United States.	Freedman, Ala.	Dr. Wm. Thos. Coggin.	March 12, 1892.	"	Lived.
3	Germany.	Strassburg.	Prof. Wilhelm A. Freund.	April 29, 1892.	"	"
4	Austria.	Cracow.	Dr. W. Harajewicz.	August 4, 1892.	"	Dead.
5	Russia.	Helsingfors.	Dr. Adolphe Törngren.	September 5, 1892.	Died.	Lived.
6	Brazil.	Rio de Janeiro.	Dr. Rodrigues dos Santos.	November 11, 1892.	Recovered.	"
7	Ireland.	Dublin.	Dr. William J. Smyly.	November 23, 1892.	"	"
8	Switzerland.	Basle.	Prof. H. J. Fehling.	November 25, 1892.	"	"
9	Holland.	Leyden.	Prof. Hector Treub.	December 2, 1892.	Died.	"
10	Canada.	Montreal.	Dr. J. A. Springle.	December 5, 1892.	Recovered.	"
11	India.	Bombay.	Surg. Maj. H. P. Dimmock.	December 22, 1892.	"	Dead.
12	England.	London.	Dr. Arthur H. N. Lewers.	February 12, 1893.	"	Lived.

best possible indication that, in our country at least, the minimum conjugate should be fixed for fœtal safety at two and three-quarters inches, or seventy millimetres.

As promptness in action is a very important element of success in symphyseotomy, we are surprised that there have been only four women lost out of the thirty-five cases, when we consider the fact that short labors have been the exception. As we have secured a record in hours of the duration of labor in the thirty-five cases, we are enabled to present the following analysis: Labor induced in 2 cases; labor before operation, of 6 hours or

under a reciprocal arrangement, whereby both published and unpublished cases have been recorded, and we have found 81, with 10 deaths and 24 children lost: France had 37 operations, with 6 deaths; Germany 11, with 2 deaths; Austria 6, with 1 death; Italy 9 and the United States 8, with no death; Russia 4, with 1 death; and there was 1 each in Brazil, Ireland, Switzerland, Holland, Canada, and India, with 1 death, in the Holland case. Under the first thirty-one operations of the year, there were three women lost. In the first six months of 1893, there were more operations than in the whole of 1892,

and the record of the year will probably reach two hundred, or more than the Cæsarean and Porro-Cæsarean cases of the world together.

It is worthy of note that France had forty-three operations and had tested antiseptic symphyseotomy during a year before England, the twelfth country to follow the teaching of Italy, had her first operation; and, although this was entirely successful, others do not appear inclined to repeat it. Old obstetrical writers in England are afraid of the Cæsarean operation, and do not appear to realize how much its mortality has been reduced, are strongly wedded to craniotomy, and cannot overcome their educated prejudices against symphyseotomy, the result of a century of training. Her younger obstetricians may in time learn, as we are doing, the value of the operation, and give it a fair, honest trial; but the medical profession is very slow in England in making advances; much more so than in her provinces, Canada, India, and Australia.

There is much of a fallacy in calculating the risks of symphyseotomy by an average of results, taking all the cases together, good and bad. France lost three women out of her first twenty-five, and six out of her second twenty-five, a change from 12 to 24 per cent. Experience should have secured better results; but experience is largely individual, and properly refers to a repetition of the same operation by the same surgeon, as is very well demonstrated by the tables of ovarian exsection. In symphyseotomy the object should be to deliver the woman of a living child, and to save the lives of both; and anything that comes short of this is

to that degree a failure. Another object to be considered is the avoidance of injuries to the woman in the opening of her pubes and the forcible delivery of her child. Haste has in it more of an element of risk of injury in the delivery than wisely-considered delay has.

Each case must be considered by itself in making a prognosis; the woman may have been a long time in labor; she may have a minimum conjugate, a small vagina, and a large foetus; the child may be barely alive or possibly dead, and the woman in a state of much exhaustion. What we call *good* cases generally recover; some *bad* ones, and even *very bad* ones, may do this, but they are to be regarded as exceptional; *extremely bad* ones rarely belie the prognosis.

Symphyseotomy in too many cases belongs to the surgery of emergency, and has to be classified as such. Where the subject is under observation before labor, and the size of the pelvis is tested by pelvimetry, rather than by a trial under the forceps, she will almost always make a recovery, provided she is not injured by a hurried delivery and has not had a hæmorrhage produced by incision or laceration.

There is also a fallacy in calculating the proportion of foetal deaths by the number lost in a hundred cases under all operators. Where the pelvis is a fraction too small for the passage of the foetal head, and the woman is operated upon early, she and the child should be saved; but where the disproportion of size between head and pelvic calibre is very marked, there is danger that the child may be lost. Under the eighty-one operations of 1892 there were twenty-four

children lost, as follows: Still-born, ten; delivered in a dying state, three; premature and lived three days, one; and died within three days after delivery, ten. An early delivery should have reduced the deaths one-half.

The question is often asked me in letters, What is the death-rate under symphyseotomy for the women and the children? We cannot estimate what should be the prospective risk under the operation, as we have already shown, for so much depends upon varying conditions which may be favorable or the reverse.

Recent experience has shown conclusively that some of the old objections to the operation have been removed under antiseptic surgery. Failure of the pubic symphysis to unite, and lameness produced thereby, are no longer tenable objections. Injuries to the sacro-iliac synchondroses are not recorded in connection with any recent sections in Europe or

America, and lacerations of the soft parts, which should seldom occur, can be treated so as to restore them to their integrity and avoid septic infection. The symphyseotomy of to-day is a much more innocent operation than that of a century ago; and we see no objection to using it as a substitute for craniotomy when the case is in skilled hands.

As far as ascertained, there were twenty-seven symphyseotomies in the United States in 1893, and there have been forty operations in North and South America, with four women and nine children lost, a maternal mortality of 10 per cent. There have been twelve operations in Philadelphia, or one-third of those in the United States, all performed by members of this Society. The operation has been performed in ten States and by twenty-six operators. Twenty-eight of the cases were in our large cities.

A Case of Symphyseotomy.¹

BY RICHARD C. NORRIS, M.D.,

PHILADELPHIA.

ROSE H., colored; aged 18; primipara; pregnancy illegitimate. About one o'clock Sunday morning, November 19, I was called to see the patient by a message from a professional friend, stating that the case required forceps to accomplish delivery.

The history obtained from the patient's mother was as follows:

The girl fell into labor the preceding Wednesday afternoon, and early Thursday morning a midwife was summoned, who waited for spontaneous delivery until Saturday. Two advanced medical students in turn were sent for, examined the patient, recognized that some serious obstruction to labor was present, and sought assistance from several physicians in the neighborhood, one of whom had catheterized

¹ Read before the Obstetrical Society of Philadelphia January 4 1894.

the patient, and had drawn about three ounces of urine. The girl's abdomen disclosed at a glance a high position of the contraction ring, which had so much the appearance of an over-distended bladder that I was not surprised that it had been taken for the latter. It is interesting to note that a midwife, two medical students, a female physician, and four other physicians examined the patient before she came into my hands.

Upon examination I was surprised at the shallow depth of the pelvis and the increased curve of the sacrum. The os was fully dilated and retracted; the membranes had ruptured. The head appeared to be quite low in the pelvis, but the finger placed behind the symphysis pubis at once ascertained that the presenting part was movable and had not engaged. The sagittal suture occupied the transverse diameter of the inlet, the posterior fontanelle toward the left. Following the sacral curve with the index finger the sacral promontory was readily reached and found to be very prominent. The pelvic measurements were as follows:

Inter-spinous	19½ cm.
Inter-cristal	20½ cm.
Diagonal	19 cm.
Circumference	70 cm.
External conjugate . .	16 cm.
Inter-trochanteric . .	27 cm.
Diagonal conjugate . .	9 cm., scant.
Estimated conjugate . .	7 cm., scant.

The foetal heart was loudest to the left of the median line; pulsations distinct, and 130 to the minute. The patient was sent to the Maternity Wards of the University Hospital, and, after receiving a full bath, an enema, and a vaginal douche, was etherized and again carefully examined.

Bearing in mind to what great extent the head of a negro baby will mould and adapt itself to a contracted pelvis, I decided to carefully apply the forceps and note the effect of judicious traction. I was constrained to make this attempt also by the recollection of a previous case in which symphyseotomy was entertained as possibly the proper treatment, which I successfully delivered by the preliminary application of axis-traction forceps, a result which, no doubt, could have been accomplished in at least some of the symphyseotomies which have up to the present time been reported.

A few efforts at traction at once showed how fruitless it would be to persist, and the symphysis was opened without further delay with the Galbatti knife, through an inch and a half incision in the lower abdominal wall. Not more than a tablespoonful of blood was lost. The ilia were supported in the usual manner by two assistants, and axis-traction forceps was applied. During traction the greatest separation at the symphysis was not more than one inch (two and a half centimetres).

As the foetal heart could be distinctly heard and was only slightly accelerated, and as vigorous tractions accomplished but little advance of the head, I thought it wisdom to deliver the patient cautiously and deliberately, to avoid injury to the child's head and laceration of the maternal tissues. With very vigorous traction, however, it required one and a half hours to deliver the child, the final birth of the head being rapid, as the heart sounds at this time were very rapid and feeble. The baby gasped a few times, discharged bloody fluid

from the mouth, and Dr. Schamberg, the resident physician, was unable to revive it, although cardiac pulsations continued for five or ten minutes after its birth.

After repairing the vaginal and perineal lacerations, the index finger was inserted in the abdominal wound, and the anterior wall of the bladder was pushed back as the cut surfaces of the symphysis were allowed to come together. The abdominal wound was then closed with silkworm-gut sutures, and the usual firm binder applied around the pelvis. The diameters of the child's head were as follows :

Bitemporal	8 cm.
Biparietal	9½ cm.
Occipito-mental	14½ cm.
Occipito-frontal	12 cm.
Trachelobregmatic	9¾ cm.
Occipito-frontal circum- ference	32 cm.
The child, a female, weighed eight pounds.	

The patient's convalescence was uneventful until the third day, when cystitis developed, followed by incontinence of urine, which contained an abundance of pus and numerous tube casts. The patient had been catheterized, without any special care as to chemical cleanliness, by one of the physicians who saw her before my visit. She also required catheterization after delivery.

Her pulse was rapid, and I feared a possible infection of the kidneys through the ureters ; but, analyzing the patient's condition, the absence of an elevated temperature, a probable diagnostic sign of kidney infection, to which I have alluded elsewhere, enabled me to exclude this complication, a conclusion substan-

tiated by the following report received from Dr. H. W. Cattell, who had no knowledge of the patient : "Many pus cells are to be found, a few granular and fatty casts, and a few casts containing cellular elements of epithelial cells. There is present a small amount of albumin. The microscopic examination showed that the kidney disease has probably been going on for a long time. In the second specimen, examined a week later, the number of pus cells had markedly diminished, and only a stray granular cast was found."

The cystitis under appropriate treatment gradually improved, and at this time there is no incontinence of urine and only a small quantity of pus.

On the fifteenth day the patient developed mania. Beginning as a condition of mild hilarity with irrepressible loquacity, acute mania soon supervened which required restraint by strapping the patient in bed. During the night she was quieted by one or two doses of hyoscine, $\frac{1}{100}$ of a grain, administered hypodermically. She was given large quantities of milk, a moderate amount of stimulation, and finally, when her mania was replaced by a condition of mental confusion and apathy, strychnine, minute doses of pilocarpine, and Basham's mixture were administered with apparent good effect.

The highest temperature throughout the five weeks of her stay in the hospital was 101°, the average being 99°. Her weight upon leaving the hospital was seventy-six pounds ; her height, five feet three inches. At her mother's earnest solicitation she was allowed to return to her home rather than to an asylum, and since that time, two weeks ago, her men-

tal and physical condition has been steadily improving. The symphysis is firmly united.

The points of interest in the case are:

(1) The prolonged labor, about ninety hours, which Dr. Harris tells me is the longest period of labor in any case upon which symphyseotomy has been performed in America.

(2) The difficulty in accurate estimation of the conjugata vera in any case of flat pelvis, a difficulty which every obstetrician has met, and one, I believe, more readily overcome by Hirst's modification of Skutsch's pelvimeter than by any other means at our disposal.

With every possible care, including in my calculation the change in the height of the symphysis and in the conjugato-symphyseal angle, the conjugate, estimated from the measured diagonal conjugate, was found to be scant seven centimetres, yet the patient, measured five weeks later with this instrument, showed a conjugate of 6.5 centimetres, which explained the difficult delivery and perhaps the death of the child.

I believe in such a degree of contraction the proper treatment at term, in the interest of the child, is Cæsa-rean section, and not symphyseotomy. Induction of premature labor and symphyseotomy might be a desirable combination, in view of the greater danger to the mother from the Cæsa-rean operation.

(3) The degree of separation at the pubic joint was certainly not more

than one inch. I have seen three symphysectomies, in all of which the degree of separation has exceeded this very little, if at all. It may be that the wide separation of seven centimetres, observed by some operators, is more likely to occur in multiparæ. The cases I have seen have all been primiparæ.

(4) The prompt appearance of cystitis following the use of an unclean catheter in a bladder which had been subjected to prolonged compression and perhaps contusion.

(5) The development of so-called puerperal insanity.

Bearing in mind the predisposing causes of this saddest of puerperal complications and reasoning *a priori*, my case could scarcely escape this disorder, for she was of unstable nervous temperament, she had had chorea in early life; kidney disease had further undermined her nervous force, and she was illegitimately pregnant; add to these, dystocia of gravest type, a labor lasting ninety hours, prolonged anæsthesia, a major surgical operation, free hæmorrhage from perineal lacerations, and, finally, cystitis, to further deplete her vital forces, and it is little wonder that her limited powers gave way under the strain of such a combination of disasters. Indeed, the wonder is not that she developed confusional insanity, but, rather, that life itself should not have failed her.¹

¹ At the present writing, two months after operation, the mental confusion of the patient has largely disappeared, the symphysis is firmly united, and there are no symptoms whatever of bladder or kidney disease.

Vaginal Hysterectomy; Hysterectomy by Morcellement and the Vaginal Route in Certain Pelvic Operations in Place of Laparotomy or the Abdominal Method.¹

BY GEORGE J. ENGELMANN, M.D.,

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THE latest step in the rapid development of gynecic surgery has been the perfection of vaginal hysterectomy and the development and extension of this operation in its application to other than malignant conditions; in other words, the adaptation of the vaginal route to other pelvic operations which hitherto had always been performed by the abdominal method. This abandoning of the more distant and dangerous abdominal route, the operation of laparotomy or cœliotomy, in favor of the surgical ideal, the attack of the nearly approximated pelvic viscera by the *vaginal* route, is certainly correct in theory, and, to judge by the admirable results achieved, successful in practice, a success which is due to the perfecting of surgical technique and antiseptic methods, a success which may well serve to exemplify the changes through which surgical methods and ideas have passed in this last decade of their highest development.

The proximity of the uterus and its appendages to the vaginal canal has naturally led to attempts to reach these organs by that most direct route, but until of late these efforts were rarely crowned with success. One of

the first known to have made persistent efforts in this direction was Robert Battey, who seems to have preferred, and to have faithfully tried, the vaginal route for the removal of the ovaries, as did Sims, Thomas, and other American operators;¹ but it was not a success, and operations begun by this method were frequently terminated by the abdominal, so that I was led to operate by the latter method; and in my consideration of the technique of the operation, in a paper read before the American Medical Association in 1878, gave preference to the abdominal route, saying that "by the abdominal incision the operation can always be completed whatever be the condition of the pelvic organs, and that a wider scope is given to the hand and instruments of the operator than through the vaginal incision; that the vaginal operation is admissible only in cases of non-adherent ovaries displaced on the vagina," agreeing with Sims, who says "that the operation can be performed by the vagina only when we are sure that there has been no pelvic inflam-

¹ Smaller ovarian cysts, like enlarged ovaries, when impinging upon the vaginal walls, were removed *per vaginam* by surgeons now and then. I recall especially Dr. Baker, of Boston, and such cases were published, but were received rather as peculiarities, and made little or no impression, no attention being given them.

¹ Read before the Southern Surgical and Gynecological Association at the New Orleans Meeting, November, 1893.

mation, no cellulitis, no adhesion of the ovaries to the neighboring organs." And *now*, on the contrary, I would say that it is *above all under such conditions*, in cases which can often not be completed by laparotomy, when inflammation has preceded, *when suppurative salpingo-ovaritis and peritonitis complicates* the case, when extensive adhesions exist, that the vaginal operation is indicated; and in extreme cases, in purulent bilateral salpingo-ovaritis with adhesions, matting together of intestines and omentum, and multiple pus centres, the vaginal route is preferable if not imperative, and abdominal section is relegated to simple non-adherent cases, admissible in suppurative forms only if unilateral or if distinct enucleable centres exist.

In difficult cases especially the vaginal route has been successfully resorted to for operations upon the pelvic organs usually reached by the abdominal incision, and all progress in this direction is a direct sequence to the success of hysterectomy by the vagina, which was successfully performed and admirably described by Dr. Dubourg,¹ a New Orleans physician, as early as 1846. But though described in this country at that time, it was ignored and forgotten, and it is to the French school, especially to Péan, that we must accord the credit of thoroughly establishing the operation and of placing the vaginal extirpation of the uterus for malignant disease among the established surgical procedures. This was but seven or eight years ago,—I believe that I

may say that it is since the time of the International Medical Congress, held in Washington, where the operation was fully discussed, that it has been universally accepted. It meant the removal of a non-adherent cancerous uterus, not too large to be successfully delivered *per vaginam*. Péan did not stop here, his forced-pressure methods, admitting of rapid and bloodless operation, facilitating the work. Solid abdominal tumors he had removed in sections, by laparotomy, by reducing their size, and masses too large to be delivered *per vaginam* were removed in fragments, not only carcinomatous uteri, but likewise those enlarged by inflammatory processes or benign neoplasms. This method of segmentation or piecemeal removal by *morcellement*, as it is termed, opened the way for operative procedure upon the pelvic viscera in various pathological conditions. The apparently insurmountable obstacle presented by the smallness of the incision, and even of the vaginal orifice, was removed; fibroids or fibroid uteri extending as high as the umbilicus were removed through the small vaginal orifice. Other French surgeons took up the work, especially Ségond, of Paris, Terillon, Quenu, and a few others. It was found that the appendages were readily reached, and with them pus centres and inflammatory deposits, intestinal injury and shock was avoided, drainage was perfect, and recovery rapid. The success attending these operations in the hands of these eminent French surgeons was remarkable, and yet, when the facts were presented to the International Congress of Gynecology at Brussels, in 1892, they met with but comparatively slight appreciation.

¹I am indebted to Dr. Ernest S. Lewis, of New Orleans, for this information, and for the pamphlet itself, published in New Orleans in 1846, in which the operator, Dr. Dubourg, gives a very complete description of the operation.

Vaginal hysterectomy, simple or by *morcellement*, the removal of larger tumors, of the appendages, with the diseased uterus in bilateral circum-uterine suppuration, of inflammatory deposits and pus centres, by the vaginal method, still remains, strictly speaking, a French operation.

PRESENT STATUS.

Vaginal hysterectomy, be it by ligature, clamp, or forci-pressure, is now a generally accepted operation, but one limited to malignantly diseased and to moderately enlarged uteri. In France and Belgium, under the leadership of Péan and Ségond in Paris, of Doyen in Reims, and Jacobs in Brussels, vaginal hysterectomy has made marked progress; it is resorted to with astonishing success, not only for the removal of enlarged and diseased uteri of all kinds, but for the removal of diseased appendages together with the uterus, especially in aggravated cases of bilateral suppuration, and even of the appendages alone; the method of removal by *morcellement* has been extended to inflammatory deposits and pelvic suppuration with multiple pus centres. The results are among the marvels of modern surgery. Péan cites 66 cases without a death, and Ségond has but 4 deaths in 32 cases, mostly desperate ones; Doyen has but 2 deaths in 50 removals of tumors by *morcellement*, many of them complicated with pelvic inflammation, and in 28 cases of extirpation of the uterus and ovaries, complicated with fibroids and pelvic suppuration, 4 deaths, 2 of them being among his first cases. But the record of my esteemed friend Dr. Jacobs, of Brussels, is one which speaks most earnestly for the advantages of the vaginal

route: 125 cases, he told me in July, 1893, many of them, as I have myself seen, most difficult and desperate, with but 2 deaths, and these of a nature not in any way to be attributed to the operation itself, almost moribund, with the removal of the pus centres as their only hope. In England and Germany, if we except the established operation, vaginal hysterectomy for malignant disease and persistent hæmorrhage or prolapse, the vaginal method has found no favor as yet, it is certainly neither appreciated nor practised; and in this country but few have as yet given it their attention, notwithstanding the forcible presentation of the subject by Henrotin, the first to operate in this country, as early as May, 1892, and his subsequent efficient work in this direction; but interest is now awakening. Dr. Montgomery, of Philadelphia,¹ reports 20 cases with 1 death, and Dr. Baldy,² who, like Eastman and others, has performed vaginal hysterectomy so successfully for malignant disease, now strongly urges the operation when disease of the uterus accompanies that of the appendages; and I am convinced that others of our operators, with their brilliant results in ordinary vaginal hysterectomy, will soon follow.

The removal of larger tumors and of the diseased uterus, together with the appendages, in cases of bilateral suppuration and inflammatory deposits in the pelvis, if necessary by *morcellement*, in other words, the vaginal method for pelvic operations, has been most successful, and the champions of this cause to whom we owe

¹ Pan-Am. Med. Congress, September, 1893.

² Phila. Obst. Soc., October, 1893; ANNALS OF GYNÆCOLOGY AND PÆDIATRY, November, 1893, p. 57.

the rapid development of this new method are Péan and Ségond, of Paris; Jacobs, of Brussels; and Doyen, of Reims. To them I refer, above all to Dr. Jacobs, whose work it was my good fortune to witness more fully, and it is upon my personal observation in his cases that my opinions are based. Various operators differ somewhat in detail and in the extent to which they apply the vaginal method, possibly in the shape of instruments used, but all resort to vaginal extirpation by *morcellement* for malignant disease, fibroid growths, bilateral suppuration, salpingo-oöphoritis and general circumuterine or pelvic suppuration.

The vaginal method takes the place of coeliotomy for the following operations on the pelvic viscera :

(1) Hysterectomy proper for malignant disease of the uterus, carcinomatous, sarcomatous, or adenomatous; for benign tumors, fibromata and myomata, not extending above the navel; painful metritis or hæmorrhagic endometritis resisting treatment; for otherwise ungovernable cases of prolapse or inversion. These are now generally-accepted operations. The novel features are :

(2) Hysterectomy for bilateral suppurative disease of the appendages, with accompanying disease of the uterus.

(3) All forms of pelvic suppuration and inflammatory deposits.

(4) Removal of the diseased appendages of one side only, advocated and practised by Dr. Jacobs.

(5) For minor operations, the breaking up of adhesions, replacing and fixation of the uterus, and for purposes of examination.

I refer only to such cases in which the vaginal incision takes the place of

the abdominal for pelvic operation; the opening of an abscess by knife or trocar as it has always been practised cannot be classed with these procedures, and must not be confounded with them; the opening of an abscess *per vaginam* is as distinct a procedure, and differs from the operation on the pelvic organs by the vaginal route as much as tapping, the emptying of an ovarian cyst by the trocar, differs from the operation of ovariectomy.

INDICATIONS.

The indication for the operation, as hitherto generally accepted, malignant disease of the uterus, has been extended so as to include morbid conditions of the uterus and appendages, exudates, and circumuterine suppuration. Péan limits the indications for hysterectomy by *morcellement* to malignant and benign growths of the uterus, and to all cases of pelvic suppuration treated to-day by laparotomy. Terrier gives as his indications, which are accepted by Dr. Jacobs, (1) the return of suppurative pelvic peritonitis after laparotomy, (2) suppurative pelvic peritonitis with fixation of the uterus and multiple pus centres, saying that laparotomy *may* be resorted to in enucleable non-suppurative salpingo-ovaritis. Dr. Jacobs has given greater scope to this method than any other operator, and now even applies it to unilateral cases, to the removal of unilateral pyosalpinx, with most satisfactory results; in one instance, at least, the patient having given birth to a child since the operation. Ségond still prefers laparotomy when operation is indicated in unilateral cases, above all unilateral salpingo-ovaritis when non-suppurative. Local

conditions, and the individuality of the case may do much to determine the method of operation, but the advocates of the vaginal route point to the bilateral suppurative conditions as the most urgent indication, limiting the admissibility of laparotomy to unilateral and to simple non-suppurative cases.

METHOD AND TECHNIQUE.

I can here but outline in general the method of operation by the vagina, as it is the method and not one of the various operations to which it is applicable which I wish to emphasize,—the reaching of the pelvic viscera through the vaginal in place of the abdominal incision. We must bear in mind the operation of vaginal hysterectomy as a type which is ever present, and may be regarded as the foundation from which the various operations upon surrounding parts have developed, with but little or no modification of technique.

The method is that of vaginal hysterectomy: The patient is usually placed in the lithotomy position, which I deem preferable, though Péan operates upon the side, in the Sims position; the vaginal incision, encircling the cervix, is made with a knife (Péan, Ségond), the thermo-cautery (Jacobs), or the galvano-cautery (Engelmann). The ligature used by many for simple hysterectomy has yielded to forcipressure,—hæmostasis by the application of multiple forceps,—the single clamp for the ligament being rarely used in these operations. The guiding principle is *not to cut without having seen and without having previously clamped* in advance of the proposed incision. This makes an almost bloodless and rapid operation possible. The

piecemeal removal of large masses—*morecellement*—has enabled the surgeon to extend the application of this method to all pelvic work, and has made it so successful in the removal of inflammatory deposits and of tumors, and in those most dreaded of all cases, general circumuterine and pelvic suppuration, with matting together of parts.

INSTRUMENTS.

For the rapid and successful performance of this operation, properly adapted and strongly made instruments are absolutely necessary. The Simon speculum; retractors of various shapes—short and broad, and long and narrow—in addition to the usual lateral retractors; volsella forceps, with comparatively short blades, strong teeth, and long handles for the fixation of the uterus, and more powerful ones for the grasping of the diseased tissues. These instruments, especially the latter, must be far stronger than the volsella forceps in general use. Hæmostatic forceps of great power are needed, likewise with comparatively short blades and long handles, which must be of such length as to thoroughly clear the vaginal orifice when left in place. This length of handle is important, so that the hand of the surgeon may not be interfered with during the operation by the numerous forceps which remain *in situ*, hanging out of the vagina from ligaments and vessels. A strong, straight bistoury; strong scissors, powerful enough to cut the gristly fibroid tissue (one pair straight, one slightly curved); a strong galvano-cautery knife for the vaginal incision, or the thermo-cautery, with a knife-blade slightly curved upon the flat.

The number of assistants necessary is greatly reduced if the plan of Jacobs is followed, by using the heavy, self-retaining speculum and the "Beinhalter" of Saenger.

THE OPERATION.

After the usual preparation, above all the most thorough antisepsis of the vagina, the cervix is seized with the smaller volsella forceps, securely grasped, so that a certain force may be exercised, and much is often needed. The vaginal mucosa is then incised with the cautery, encircling the cervix as near to the os as it is possible, in non-malignant cases; in the malignant we, of course, escape the infiltrated tissue. The tissue is then pushed back with the finger, anteriorly, posteriorly, and laterally, under irrigation, until the peritoneum is reached, posteriorly in the Douglas or anteriorly in the vesical reflexion, as seems most advantageous in the individual case, the Douglas being preferred. This is preparatory to any one of the operations in which the uterus is involved. If the appendages of one side only are to be removed, a pus centre is to be enucleated, or adhesions broken up, the vaginal incision is limited to the posterior and lateral circumference of the cervix, and the work is done through this opening. The lower portion of the uterus having been denuded, forceps are placed upon the corresponding segment of the broad ligament; the uterine artery and the tissues are severed as far as the vessels are controlled. Denudation is continued, and the corresponding upper portion of the broad ligament is clamped until all vessels are controlled; pressure forceps are likewise applied previous

to the removal of the appendages when this is desirable. Where piecemeal removal—*morcellement*—is necessary the uterus is divided transversely into two halves after liberation of the neck, and section after section is excised, after guarding against hæmorrhage by properly placed forceps and by the grasping with the strong volsella above the point of insertion of the knife, and this is repeated until the *morcellement* of the uterus is complete, be it only a moderate enlargement or a fibroid mass extending into the abdominal cavity.

In this same manner inflammatory masses in the pelvis are treated, and there can be but little loss of blood if this principle of forcible pressure for hæmostasis before the use of knife or scissors is properly carried out.

During the peeling-out process, such pus centres as are within reach are opened if they cannot be enucleated, and the pus escapes through the vaginal opening. Irrigation is, of course, freely resorted to. Sometimes such pus centres can be peeled out without bursting, but it is true of these, as it is true of any part of the firmly embedded uterus, that if it cannot be dragged down or enucleated, as much as is possible is cut away and the firmly adherent remnants left in place without fear. The appendages are liberated and removed after preliminary hæmostasis, and in suppurative cases such pus centres as have not been opened in the liberation of the uterus are searched for during the liberation and removal of the appendages, and opened whenever they cannot be enucleated, removing all that can be removed, *leaving such parts as cannot be liberated or cut away*, a principle which is followed

with perfect safety and is true of inflammatory masses of the uterus or the appendages, which are removed if they yield, but left in part where removal is impossible. The possibility of such methods permits rapidity of operation, and successful operation in otherwise impossible cases, impossible by laparotomy or on account of the difficulty of reaching the parts through the agglutinated mass of intestines and omentum and on account of the uncertain upward drainage; the success of these manipulations is, moreover, to a great extent due to the perfect drainage which is necessitated by the removal of the central uterine mass and the forceps, which remain and keep open this most favorable of all passages for remaining secretions; much is also owing to the primary incision with the cautery, which I look upon as of great importance; it saves much time, there is no hæmorrhage, no time lost by ligation or sewing, malignant nodules are destroyed if present, infection from secretions from above and from the outpouring pus is prevented, and drainage is necessitated, even if the forceps did not remain, as speedy union is impossible.

The advantage of *forci-pressure* over the ligature for hæmostasis is undoubted in intricate operations; it is a method I have to a great extent followed ever since Péan and Kœberle devised the first instruments known to me, over twenty years ago. Their advantage in this operation is evident; to quote Dr. Jacobs, "We owe to the forceps rapidity, greater security against hæmorrhage, the absence of the possible danger of infection which we have from the suture itself, and drainage, which of necessity follows

the leaving in place of the pressure forceps." And he calls attention especially to the advantage gained by passing the dressing above the point of the forceps, and thus holding the intestines well away from the wound.

ADVANTAGES OF THE VAGINAL ROUTE.

The advantages of the vaginal route for all pelvic operations to which it is applicable are: the proximity of the parts to the hand of the operator; the possibility of controlling the work of knife and scissors by the eye; the rapidity of operation, which is made possible by the absence of ligature or suture; the absence of hæmorrhage by the application of *forci-pressure* before section; the avoidance of the peritoneal cavity proper to a more or less marked extent. To this I mainly attribute the absence from shock which is claimed for these operations, and it has certainly been proved a truth as far as I have seen. The vaginal opening appears as the natural route for operation upon parts below the pelvic brim, above all in cases of suppuration. Not only the proximity of the parts, the more or less complete shutting off of the peritoneal cavity, but above all the perfect drainage through the large vaginal canal without any possibility of stagnation of fluids, a drainage which is ideal after cautery incision and *forci-pressure*. No visible cicatrix is left, and the possibility of ventral hernia, which is not infrequent after the abdominal operation, is avoided. Injuries to the viscera, I am assured by Dr. Jacobs, can be as readily remedied as during operation by the abdominal incision, but they rarely occur, as the intestines are not likely to come into view.

Hæmorrhage which cannot be controlled by the forceps, oozing from torn surfaces, can be controlled by the gauze tampon. The one objection is the necessarily small field of operation, the smallness of the opening, which would limit the opportunities for this method were it not for the possibility of *morcellement*, which admits of the successful removal, which I was fortunate enough to witness at the hands of Ségond, of large fibroid tumors extending as high as the umbilicus, or of fibroid tumors and inflammatory masses almost filling the pelvic cavity, as was proved to me by Dr. Jacobs. As a method the vaginal operation is not to replace that by abdominal incision, but it is to enlarge the field of the surgeon and to facilitate his work.

The vaginal operation appears to me as the operation of choice in cases of extensive inflammation and suppuration, and whenever practicable it should be resorted to, by reason of its simplicity and rapidity and on account of the avoidance of the abdominal cavity. The very adhesions which form an obstruction in our efforts to reach the pelvic viscera by abdominal incision, the matting together of intestines and omentum, are a protecting guard against that dangerous cavity in operations by the vaginal route. Those familiar with the operation are enthusiastic in its favor, and well they may be if we consider the results achieved, successful results in those cases which are most to be dreaded when approached by the abdominal incision. I refer to the various forms of pelvic suppuration. In view of these results, I am tempted to indorse the opinion of

abdominal incision should be limited to cases with enucleable pus-sacs or to simple non-suppurative salpingo-ovaritis.

In comparing the results of the vaginal and of the abdominal methods, operations including the appendages and operations for suppuration of the pelvic organs alone need be considered; for bilateral pyosalpinx with serious affection of the neighboring tissue the vaginal method is the method of choice, and in cases of pelvic suppuration with multiple centres it is a necessity, as this is always a difficult and dangerous operation by the abdominal route, and one which may have to be abandoned as incomplete. Hysterectomy by *morcellement* also affords a far greater probability for a cure for pyosalpinx of gonorrhœal origin, a cure which would appear probable or possible only by this method of operation, because it admits of, if it does not necessitate, the removal of the uterus as well, and I believe that removal of that organ in these cases is a necessity, that the imperfect results which accompany so many of the so-called successful operations for pyosalpinx and pelvic suppuration by the abdominal incision are due to the leaving of the uterine body; within the uterine mucosa and the remnants of the tubes is left the nidus of disease, and a cure, a restoration to health by the mere removal of the larger pus centres is improbable. Notwithstanding that the operation is still young, some of the most striking results have been achieved by the completion of operations, unsuccessfully begun by abdominal incision, and the removal of that remaining nidus,—the uterine body,—in patients who had recovered from

successful operation by abdominal section, but to whom health was not restored until the final hysterectomy by the vaginal route. I will repeat that in those cases in which gonorrhœal affection has led to tubal and pelvic disease a cure without the complete removal of the infected uterus and the tube in its entirety would seem impossible, hence vaginal hysterectomy by *morcellement* should take precedence in such cases.

The after-treatment is simple, and as my own experience does not extend beyond hysterectomy for malignant disease of the uterus, I can speak only of the cases I have seen in the hospital of Dr. Jacobs, near Brussels; recovery without untoward symptoms of any kind, without rise of pulse or temperature, was the rule; removal of the forceps after forty-eight hours, change of dressing, then the use of frequent vaginal douches, the sitting up of the patient on the fifth day, closing of the vaginal wound, and dropping off of the eschar on the thirteenth or fourteenth day,—phenomenal results.

In conclusion, let me say that I would urge the vaginal route for pelvic operation; above all, hysterectomy by *morcellement* whenever possible, not alone by reason of the advantages presented and the success of such operation, but because of the greater familiarity with the pelvic viscera, the greater tactile dexterity obtained, which must lead the gynecic surgeon to a more thorough and precise knowledge of these parts, and will inaugurate a new era in pelvic surgery.

The safety and facility with which such operations can be performed opens up an entirely new field for

minor operation,—the breaking up of adhesions, the replacing of the uterus, and the examination of the many and important parts within reach of the finger.¹

I will close with the views emphasized by Dr. Jacobs, the enthusiastic advocate of vaginal operation, who urges vaginal hysterectomy my *morcellement* for the removal of malignant and benign tumors of the uterus; but, above all, for pelvic suppuration and bilateral pyosalpinx, as he claims that removal of the uterus is necessary, that trouble invariably remains within the uterus and the termini of the tubes when the tube, the main pus centre, only is removed by cœliotomy; he would even see unilateral cases treated through the vaginal opening. It is the operation *par excellence* in pelvic suppuration with multiple pus centres, as the abdominal cavity is completely shut off, drainage is perfect, and partial removal is admissible. Exudates and pelvic deposits he would treat by this method where a rapid cure is a necessity. In the working-woman, who has neither time nor means to devote to the tedious treatment necessary, the removal of the uterus and its appendages by *morcellement* leads to speedy and perfect recovery, certainly to a quick relief, which is possible by no other means.

If I have quoted so freely the opinions of my esteemed friend it is because I owe to him my appreciation of this method,—this method which I shall henceforth adopt for all suitable cases.

¹ De l'hystérectomie par morcellement dans les suppurations pelviennes, Brussels, August, 1891.

Nephro-Lithiasis.

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SINCE Morris, in 1880, placed the operation of nephro-lithotomy in the category of modern surgical procedures, many operations of a like character have been successfully performed by surgeons in all countries. These successes have led to an extension of the surgery along the ureter, so that now this narrow tube is invaded from either the bladder or kidney extremity, its canal dilated for stricture, and impacted stones removed from any part of its course. The formation of calculi in the pelvis, calices, and in the parenchyma of the kidney certainly is not of rare occurrence, and demands the attention of the general practitioner and surgeon that their presence may be early recognized and the proper procedure for their removal resorted to promptly. It is the prophylactic or anticipatory surgery that brings the best results, the lowest mortality, the most cures and restored functions. This class of surgery is called rash, mutilating, unjustifiable, etc., etc., by a few of our would-be modern surgeons, who are still poulticing tibial sequestra and draining pus-tubes and ovarian abscesses through the groin and vaginal vault.

The great destruction wrought to the kidney structure by an impacted calculus can best be understood by examining the kidney of one of these neglected cases.

Calculus may form in the pelvis or calices at any age, but is more likely to occur in early childhood or after

the fortieth year. Uriate of ammonium in infancy, uric acid in adults, and oxalate and phosphate of lime after forty being the composition of these stones at these ages. They may develop in one or both kidneys, in the pelvic calyx, parenchyma, or all combined, the secreting structure of the organ, as a rule, being injured in proportion to the size, duration and location of the stone. A small stone may lead to the complete destruction of the kidney by occluding the ureter for a long period, or, if small enough to pass through this narrow canal, may give rise to no other symptom than severe pain during the passage, and cease to give further trouble, unless by its presence in the bladder it acts as an irritant or as a nucleus for the development of a vesical calculus. Again, a large stone may, by a gradual growth in a location that does not produce an obstruction to the flow of the urine, attain an enormous size without producing much suffering by its presence. The kidney may become one large cavity, containing pus, blood, urine, or all combined, without the patient having experienced any of the so-called characteristic paroxysms of nephritic colic. A stone weighing several ounces has been removed, post mortem, from a cyst, the kidney structure having been destroyed. The woman had presented no history of such a state of affairs. This case is a rare one, and is mentioned to call attention to the fact that all these

cases do not have a typical history. As a rule, a patient with a suppurating kidney, due to the presence of a stone, will have hectic fever, emaciation, and pus in the urine. A pyonephrosis may insidiously develop in the sac of a hydro-nephrosis (due to presence of a stone) without the development of the usual concomitant symptoms of the presence of or development of pus. A case may begin as a retention cyst if the stone occludes the pelvis, the calices, pelvis, and even the parenchyma being dilated, forming a large tumor perceptible on inspection and palpation, attaining in some cases the size of an adult head. Suppuration in such a cyst may take place without any acute exacerbation of pain or fever. An imprisoned stone giving rise to much pain may, by an ulcerative process, be set free in the cellular tissues surrounding the kidney and develop a peri-nephritic abscess. Like abscesses in the region of the appendix, these post-nephritic suppurations are always secondary. The cause in the majority of instances will be found originating about the pelvis or the ureter. Many of these cases are incorrectly diagnosed as psoas and iliac abscesses due to a carious vertebræ, and a plaster jacket applied to prevent a scoliosis and produce a cure. These cases will continue to suppurate as long as the sequestered calculus is permitted to remain in the abscess cavity.

It is remarkable how much urine one of these seemingly disorganized kidneys will secrete where the ureter is patulous, or even through a urinary fistula. A normal quantity or even more is often passed from a kidney, the macroscopical appearance of which would indicate the complete destruc-

tion of its secreting structure. Where true albuminuria is present it is due to the tissues of the secreting substance being involved, and not to lesions of the calices and pelvis. Albumin due to the presence of pus is misleading until its exact source is discovered, not always an easy matter.

In the last three months I have operated for the removal of nephritic calculi on three patients, two being females, one male, the left kidney being affected in one of the women, the right in the other two cases. The man was 22 years old; the women, 33 and 44. The largest stone removed weighed two and a half ounces, composed of phosphate of lime.

I append the history of two of the cases to illustrate the two types of the disease, the acute, obstructive nephrolithiasis with perforation and peri-nephritic abscess, and the chronic, partial obstructive with retention and development of the stone in the calices and pelvis, with chronic pyonephrosis.

The third case was of the acute variety, with post-nephritic suppuration of nine weeks' duration at the time of the operation.

NEPHRO-LITHIASIS; OPERATION; RECOVERY.

CASE.—C. W., aged 22, single. This young man, while in perfect health, was taken with a pain of the most intense character in the region of the right kidney. This pain persisted with unabated severity for a number of hours. Large and oft-repeated hypodermics of morphine finally subdued the greater intensity of his suffering, but while not under the influence of the opium he suffered much. Three or four days after the

beginning of his attack he developed a fever of a septic type, his pains at the same time greatly subsiding. It was at this period of his illness that the pain-producing, impacted calculus found an exit through the walls of the ureter or pelvis, at the same time relieving his pain by its escape, and producing evidences of sepsis and local suppuration.

In the beginning of his attack he passed blood-stained urine, the quantity being much diminished. After the imprisoned calculus was set free in the tissues surrounding the kidney an enormous quantity of urine (polyuria) was passed, the specific gravity of which was only 1002. This (polyuria) increased flow of pale urine with a low specific gravity has been a diagnostic symptom in several of my cases of acute nephro lithiasis.

The young man continued having his irregular chills, sweats and fever for four weeks, losing much (eighty pounds) weight and all his strength. During this period he was passing large quantities of pale, light urine, and was having more or less pain in the region of the right kidney. At this time I saw him for the first time.

After analyzing his symptoms and history, I decided that I had to deal with a peri-nephritic abscess of a nephritic calculus origin. An operation revealed the correctness of my diagnosis. The young man has made an ideal recovery, and is to-day a perfect picture of good health.

This case had been diagnosed appendicitis, typhoid fever, abscess of the liver, and malaria, by as many physicians as I have enumerated diseases. This mistake is easily made in similar cases if the physician is not systematic in his diagnostic methods.

NEPHRO-LITHIASIS; NEPHRO-LITHOTOMY; STONE WEIGHING OVER TWO OUNCES REMOVED.

Mrs. P., of Olathe, Kan., patient of Dr. C. G. McKinley. This lady, aged 44, mother of four children, youngest 5 years old, was sent to me by Dr. McKinley.

About five years ago she noticed a small enlargement in the region of the right kidney. At the same time more or less pain and uneasiness in that locality was felt. The uneasiness has continued up to this time. At no time has she had hard or unbearable pain like that due to the passage of a renal calculus. The tumor has continued to grow, but in the last year much faster than formerly. She is fairly well nourished, but some sallowness of the skin is noticed. Has at no time been confined to her bed from any symptoms pointing to this locality as a cause of her illness. Has had no fever at any time or local tenderness pointing to any acute suppurative process. Has been doing the ordinary duties of a housewife. Her urine during the last year has been clouded. On examination I found it contained much pus. Her bladder has been irrigated frequently with boracic acid, etc., with no diminution of the pus in the urine. Her bladder has not at any time been acutely inflamed or painful.

She has not at any time had any acute exacerbations of pain like that produced by the passage of a renal calculus. At times she has passed large quantities of urine, but it was always clouded during the last year. On examining her I found a tumor the size of an infant's head in the right renal region, slightly movable, rather soft or semi-fluctuating, pain-



RENAL CALCULUS.

less on handling, and smooth to the touch. Dulness in front of the growth, but below the head of the colon resonance was elicited on percussion. The ascending colon was pushed to the inner side of the growth. Taking the history and well-marked physical signs, I decided that I had to deal with a pyo-nephrosis, the origin of which was very probably due to the presence of a calculus. The tubercular origin of the condition was eliminated by its duration, pain, absence of bacilli, disease of other kidney being eliminated, and absence of rapid and continuous emaciation, so often seen in the tuberculous kidney.

Operation performed November 18, 1893, Dr. J. D. Griffith assisting. An incision from the anterior or free end of the twelfth rib (which was short) was made, extending downward and forward in a circular direction to near the anterior superior spine of the ileum. This was carried into the anterior border of the quadratus lumborum. A few cutaneous branches from the lumbar and intercostal arteries were divided. The outer edge of the latissimus dorsi and posterior border of the external oblique were exposed and divided, then the internal oblique and transversalis. The edge of the erector spinæ was not disturbed. This brought me down to the outer border of the quadratus lumborum. Much of the dissecting was performed by the fingers and handle of the scalpel. The kidney was now pushed from in front into the incision as much as

possible. An exploring trocar was introduced to make sure that I was not entering the peritoneum, and to find pus or other suspected fluids, and to hunt for stones. The first thrust of the trocar struck both pus and calculus. This opening was enlarged with the forceps and fingers. I found a large collection of pus in the kidney and stones, the aggregate weight of which was about three ounces. These were removed, the largest one weighing over two ounces and a half (see Plate I, Fig. 1). Cavity was irrigated and packed with gauze and drainage put in. A large part of the incision was left open, as these cases suppurate freely and for a long time. The hæmorrhage was at no time very alarming, being mostly venous from the parenchyma. A few hours after the operation she passed blood-stained urine, showing that the ureter was patent, as was evinced by the passage of pus in the urine before the operation. Two days later her urine was quite normal in appearance and quantity. The dressings were more or less soiled with pus of a urinous odor.

"Ideal surgery" would have demanded the removal of the kidney at the same time I removed the stone, but the mortality of the primary operation of nephrectomy for a suppurating kidney is very high. If it is necessary the diseased organ can be removed at a later period, and that, too, with a better prospect of a recovery from the operation.

Procidentia Uteri.¹

BY CHARLES P. NOBLE, M.D.,

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THE condition of procidentia uteri is of importance to the practitioner because of the frequency with which it exists, and because of its curability when properly treated. Without proper treatment it becomes progressively worse, until finally, in some cases, such changes ensue in the posterior vaginal wall and pelvic floor that its curability is questionable. In order to appreciate the treatment of procidentia it is necessary to refer to the factors engaged in maintaining the pelvic organs in their normal relations, and also to the causes which tend to produce their downward displacement, and especially to the displacement of the uterus. The tendency is strong to consider the uterus separate and apart from the other pelvic organs, especially in relation to the causes of its displacement. This tendency is unphilosophical, and results in confusion and in erroneous inferences. In general, the same factors preserve all of the pelvic organs in their normal relations, and the same factors are at work in the displacement of each and all of these viscera. The influence of atmospheric pressure in maintaining the pelvic viscera in their normal relations is frequently overlooked. The peritoneal cavity is a shut sac immediately in relation with the thoracic cavity, being separated therefrom by the diaphragm. As under normal conditions the urethra,

vagina, and rectum are closed canals, impervious to air, it follows that atmospheric pressure has a very positive effect in maintaining the pelvic viscera at a certain level. This level is fairly constant, as the capacity of the thorax (which has a free communication with the external air) is fairly constant. This influence of atmospheric pressure has been treated of by writers, especially by Thomas, under the heading of "The Retentive Power of the Abdomen." Atmospheric pressure is the constant factor giving the abdomen retentive power. Variations in the tonicity of the abdominal muscles interfere with this function; and when the abdominal walls become very lax from over-distention, or from atrophic changes, this factor in maintaining the normal status of the pelvic viscera becomes largely inoperative.

Habits of dress also modify the influence of the intra-abdominal pressure in maintaining the pelvic viscera in position. The use of tight corsets, by restricting the excursions of the diaphragm, tends to prevent the ascent of the pelvic viscera which takes place normally with each expiration. Also, by displacing the abdominal viscera downward and forcing the bowels down upon the pelvic organs, tight lacing acts by driving downward the pelvic contents. Tight lacing kept up for a long period of time, acts further by inducing an atonic condition of the muscles of the trunk,

¹ Read before the Obstetrical Society of Philadelphia, January 4, 1894.

thereby interfering with the normal intra-abdominal pressure, and with the so-called retentive power of the abdomen.

Another factor which is not much dwelt upon is the adipose tissue which is present in the pelvis. When a woman becomes rather suddenly and markedly emaciated, the loss of adipose tissue in the pelvis favors the displacement of the pelvic viscera. During and after the time of the menopause, when the fatty tissues about the genitalia very generally undergo absorption, displacement of the pelvic viscera often occurs. Prior to this time, in many cases, although various injuries which favor displacement may have been sustained, yet, owing to the presence of the fatty tissue, displacement does not result. In these cases, after the atrophy of the fatty tissues occurs, prolapse of the pelvic viscera takes place.

Other factors, not directly connected with the pelvic structures themselves, which must be considered, are certain habits of patients. Too laborious work favors displacement of the pelvic organs, especially when their proper supports are for any reason weakened. As a rule, those who are called upon to do laborious work have vigorous muscular systems, and with intact pelvic organs no harmful consequences ensue. Such consequences are most apt to ensue when a feeble woman is called upon to do extremely heavy work, or when such work is performed by one who has suffered injury to the pelvic supports.

Constipation favors prolapse of the pelvic viscera for very much the same reason as does too laborious work—the straining at stool accomplishing the same result as the too laborious

work. Constipation acts also by favoring pelvic congestion, which, no matter how induced, always favors displacement of the viscera by inducing laxity of the tissues.

These general considerations are of importance, not only as permitting the proper appreciation of the causes which underlie displacement of the pelvic viscera, but also for the very great assistance in the curative treatment of these disorders which a proper appreciation of the above facts affords.

More important, however, than the foregoing are the proper supports of the pelvic organs themselves. In women, as in men, the entire pelvic contents are supported by the action of the levator ani muscles, the pelvic fasciæ, the sacro-sciatic ligaments, and the pelvic connective tissues. It is true that the peritoneum and the connective tissue which lies under it affords some additional support from above. The bladder, the womb and its appendages, the vagina and the rectum, and the super-imposed, small intestines are all supported by the structures referred to. They make up the pelvic floor, and upon their integrity the normal position of the pelvic viscera depends. The connective tissue of the peritoneum about the bladder and also about the rectum and the other organs has a minor influence in fixing within certain limits these organs. The uterus, more especially, receives other support than that of the pelvic floor,—the utero-sacral, the broad, and the round ligaments affording a certain amount of support to this organ. The careful study of the whole subject, however, is convincing that these ligaments and the retentive power of the abdomen, brought about by the atmos-

pheric pressure, are of importance, rather as maintaining the uterus in its normal position of ante flexion than in keeping it at a certain plane in the pelvis. Undoubtedly, these factors have a certain influence in preventing downward displacement of the uterus, but all combined they are not of so much importance as is the normal pelvic floor.

The principal support which maintains the pelvic viscera in their normal relations is the pelvic floor, the most important structures in which are the levator ani muscles and the pelvic fasciæ. Upon the integrity of these structures the support of the pelvic viscera depends. When these structures no longer perform their normal functions, either because of atrophy or because of laceration of their tissues, downward displacement of the pelvic viscera is favored. This point cannot be too strongly insisted upon; nor can it be made too clear that these are the structures of importance in giving support to the rectum, vagina, bladder, and uterus, rather than an imaginary structure formerly known as the perineal body.

The old theory that the perineal body was the prime factor in pelvic support must be definitely abandoned, because it is based in error. There is no such structure as the perineal body. The tissues between the lower end of the vagina and the rectum are certain slips of the levator ani muscles, the transversus perinei muscles, the deep and superficial fasciæ, connective tissue, blood-vessels and nerves, and the bulbo-cavernosus muscle. The ends of these slips of muscle unite in the median line, forming a somewhat tendinous union. The amount of tissue between the rectum and vagina

is very much overestimated. Any one can demonstrate that this septum is scarcely more than a third of an inch in thickness if he will examine a nulliparous woman, placing the thumb in the vagina and the forefinger in the rectum. Such an examination will dispel from his mind any idea which he may have had that there is a large wedge-shaped mass of tissue situated between these two canals, which, in virtue of its size and shape, holds up the pelvic organs.

Women having the greatest amount of tissue between the anus and posterior commissure of the vulva, have really the least support for their pelvic organs. This fact, so directly at variance with the ancient teaching upon this subject, is easily explained. When the levator ani muscle, or a part of it, has been torn through, the pelvic floor drops down, and if the skin over the perineum has not been ruptured it stretches out. The anus drops down toward the feet and back toward the coccyx, so that the skin between the anus and the vulva is put upon the stretch. These facts are easily capable of demonstration, and any one who doubts them can easily satisfy himself of their correctness. They show also that visual inspection of the perineal region is insufficient to test its integrity. Cases which have appeared to receive no injury may have severe lacerations within the vulva; and other cases which appear to have been badly torn because

the involvement of the skin over the perineum may, in reality, have escaped without injury to the deeper and important structures of the pelvic floor. The examination, to be complete, must include palpation of the levator muscles to test their powers

of resistance when drawn upon by the palpating fingers.

The physiology of the support of the pelvic viscera appears to be as follows: The rectum and vagina receive direct support from the levator muscles. Their orifices are kept closed partly by the action of these muscles, and partly by the sphincter ani and bulbo-cavernosus muscles. The anterior wall of the vagina and the bladder are supported upon the posterior wall of the vagina; and the uterus and its appendages are supported upon these structures. The connective-tissue attachments of the organs named, of course, are of service in limiting their mobility; and, in addition, the proper supports of the uterus are of much importance.

When all of the factors concerned in maintaining the pelvic organs in their proper relations are normal, these organs are retained in their proper positions. Their downward displacement is due either to increased pressure from above, or to diminished support from below, or to both. The influence of heavy lifting, of tight lacing, of constipation, and of emaciation, in favoring displacement, have been considered. Two other causes remain: one is retro-displacement of the uterus, and the other is increase in the size and weight of the uterus. The influence of the second cause in favoring downward displacement is so clear that it is unnecessary to enlarge upon it. The influence of retro-displacement in favoring descent of the uterus is equally clear, if the anatomical and physical relations of the pelvic viscera are remembered. The uterus, in its normal position of ante-flexion, lies with its axis at an acute angle with

the vagina; indeed, when the bladder is empty, the fundus of the uterus approaches very close to the anterior wall of the vagina. In this position, when the uterus is forced downward, it simply tends to push the anterior wall of the vagina against the posterior wall, when it meets with the resistance of the pelvic floor; hence the vagina is not distended. In this position the force of the intra-abdominal pressure falls upon the posterior wall of the uterus, and maintains the uterus in its normal anti-flexed position. If, for any reason, the uterus becomes retro-displaced, its axis becomes parallel, or almost parallel, with the axis of the vagina. Intra-abdominal pressure falls upon the fundus and anterior wall of the uterus and the vesico-uterine pouch, and tends not to drive the cervix and the anterior vaginal wall against the posterior vaginal wall, but to drive the whole uterus downward along the axis of the vagina; thus to a greater or less degree, inverting the vagina in its descent. In this mal-position of the uterus, intra-abdominal pressure, instead of being a conservative force tending to maintain the uterus at a certain level, becomes a factor of evil tending to produce procidentia uteri and prolapse of the bladder. The degree to which these displacements are carried depends, of course, upon the amount of intra-abdominal pressure, upon the laxity of the tissues in an individual case, and upon the amount of resistance met with from the pelvic floor. So much for the causes acting from above.

When the pelvic floor becomes weakened, either by laceration or atrophy of its structures, adequate support to the pelvic viscera is no

longer afforded. The pelvic floor drops downward and backward, the introitus vaginæ gapes open, the posterior wall of the vagina drops away from the anterior wall, the rectum tends to bulge forward through the gaping vulva, constituting a rectocele; the anterior wall of the vagina and the bladder tend to prolapse into the introitus, constituting a cystocele; and in turn the uterus tends to come down (partly from lack of support, and partly through the influence of pressure from above), constituting a prolapsus or procidentia uteri.

The proper study of every case of procidentia involves a careful investigation into each of these factors which may be concerned in its production, and upon the proper recognition of exactly what underlies each case depends the scientific and curative treatment of the disorder.

In my experience, by far the most important cause of procidentia is laceration of the pelvic floor, especially lacerations involving the levator ani muscle and pelvic fascia. This injury is the primary cause of procidentia in ninety-nine per cent. of the cases which come under my observation. I see numerous cases of slight prolapsus or descensus uteri, where the uterus simply descends one inch, or an inch and a half, which are due to other causes than a torn pelvic floor. Such causes as tight lacing, hard work, constipation, pelvic congestion, etc., can bring this about. But in my experience these causes, broadly speaking, are incapable of producing complete procidentia of the uterus. There are exceptions to this rule, but only one has come under my observation. This was a case of complete procidentia in a nulliparous woman

having lax tissues, who had been compelled to do laborious work with heavy lifting. Her uterus doubtless had become retroverted, then prolapsed, and, finally, had been forced down so low that it protruded between the labia. This woman had a lax, but intact pelvic floor. She was cured by changing her occupation, the use of tampons for a time, followed by a Smith-Hodge pessary.

Treatment.—As the primary cause of procidentia is a torn pelvic floor, it follows that if lacerations of the pelvic floor were properly repaired at the time of their occurrence, or shortly thereafter, that procidentia uteri would be prevented. In other words, the way to prevent procidentia uteri is to do immediate perineorrhaphy in all cases of laceration of the pelvic floor following labor. It is unnecessary at this time to go into the details concerning the technique of immediate perineorrhaphy. I shall simply say, that in this operation the sutures should be placed just as carefully, and in the same manner, as for the secondary operation. The patient should be anesthetized, the parts well exposed, and the suturing begun at the upper angle of the tear, no matter how high up this may be. The sutures should be tied as they are introduced, so that when the last suture is introduced and tied the operation is completed. Immediate perineorrhaphy can be done at any time within twenty-four hours after labor, and doubtless even later, with complete success. If, however, the suturing is postponed more than six hours after the injury has occurred, it is better to freshen the raw surfaces by scraping them with a knife. These lacerations will be found, almost invariably, to

extend up one or both sulci of the vagina. They are never median, unless the tear extends through the sphincter ani, and then splits the recto-vaginal septum. It is far better to postpone immediate perineorrhaphy for six, ten, or twenty-four hours, and to have proper assistance, than it is to attempt the operation at the close of labor, when the physician is tired out, the patient exhausted, and, perhaps, without anæsthesia, because no one is present to administer the anæsthetic. The practice somewhat in vogue of putting in one, two, or three sutures from the skin perineum cannot be too strongly condemned; because all severe lacerations extend one, two or three inches up one or both sulci of the vagina, and cannot be reached by sutures introduced from the skin perineum. All that such suturing can accomplish is to unite the unimportant superficial structures of the skin perineum, while the torn levator muscles are not included in the sutures.

The other factors which produce procidentia are those which increase intra-abdominal pressure (such as tight lacing and laborious work), retro-displacement of the uterus (which favors procidentia, because in this position intra-abdominal pressure tends to drive the uterus along the vagina, and parallel with its axis), pelvic congestion, brought about especially by constipation, sub-involution of the uterus and other pelvic organs, and in rare cases the presence of a tumor adds to the weight of the uterus. A perfect prophylaxis of procidentia uteri involves the prevention or cure of all of these conditions.

When procidentia really exists cer-

tain conditions are always present. The uterus prolapses into or through the vulva, and its proper ligaments are overstretched. The anterior vaginal wall and bladder are prolapsed, and in many cases a large cystocele is present. The posterior vaginal wall and rectum have dropped downward and backward with the pelvic floor; and the rectum may, or may not, have bulged through the open introitus, if so, constituting a rectocele. In many cases the uterus will be found elongated, constituting the condition known as supra vaginal elongation of the cervix. This is brought about by stretching of the cervical tissue, rather than by its hypertrophy. In such cases the fundus uteri occupies a higher plane in the pelvis than would appear from the position of the cervix. In many such cases the uterus measures four, five or even more inches; and yet often reducing the procidentia and putting the woman in the knee-chest posture, it will be found to measure only three or four inches.

The method of operating which I have followed in treating this class of cases is to do a high amputation of the cervix, anterior colporrhaphy, and Emmet's perineorrhaphy. The amputation of the cervix reduces the size and length of the uterus, and through the way it is done draws the vagina to a higher point in the pelvis. The anterior colporrhaphy takes up the slack under the bladder and makes the anterior vaginal wall a straight line from the pubic arch to the cervix, as it should be. The perineorrhaphy restores the pelvic floor to its normal condition, and gives permanent support to the bladder and uterus. Naturally the uterus should be main-

tained in ante-flexion, and if after an operation it does not assume this position, a Smith-Hodge pessary is introduced to maintain the uterus in its normal position. Practically, I have seldom found this necessary even for a short time, and of the very many operations which I have done for procidentia, so far as I know, not a single woman is now wearing a pessary.

In amputating the cervix, the woman is placed in the lithotomy posture; the field of operation made aseptic; the cervix is seized with bullet forceps and drawn down; the vagina is cut loose from the cervix; the bladder is stripped off in front, and the sub-peritoneal tissues stripped off behind. The lateral attachments of the cervix (the bases of the broad ligaments) are now ligated and cut away. About an inch of the cervix is now amputated; then the cut edges of the vagina are stitched to the stump of the cervix, the mucous membrane of the vagina to the mucous membrane of the cervical canal; thus covering in the stump, and securing primary union. This operation draws up the vagina to the cervix at its new level. Also, it very materially reduces the size and weight of the uterus, not only through removing part of the structure, but by the process of involution which it induces.

Anterior colporrhaphy is next performed. In those cases in which the bladder has not been markedly prolapsed a simple oval denudation is made, which is closed with a continuous catgut suture in two layers. In marked cases of cystocele Stoltz's operation is done. This consists of a circular denudation, with a single

running suture placed like the drawing-string of a bag, and tied in the same way. The operation is quickly done, and secures a firm point of cicatricial union under the bladder. I believe that the merit of the operation consists not only in the ease and rapidity with which it is done, but also that it offers a more permanent resistance to the descent of the bladder at a future time.

Emmett's perineorrhaphy is then done, and is that part of the operation which makes the cure a permanent one. The operations upon the cervix and upon the bladder would for a time overcome the prolapse of these structures, but when the woman got about on her feet again, the prolapse would simply reappear were not the primary cause of the trouble (namely, the lacerated pelvic floor) repaired. In restoring the pelvic floor I have not been content with doing the regular Emmett's perineorrhaphy, but taking this operation as a basis, I have made the denudation as extensive as possible; in this way not only bringing together the sundered structures, but in addition making the vagina as narrow as possible, and also sewing up the vulva to a certain extent. In this way the vagina can be reduced in size, so that it scarcely admits more than the index finger,—an end to be desired in every bad case of procidentia.

In doing amputation of the cervix, a few heavy silk ligatures are used, but most of the operation is done with catgut. It is well to have a silk ligature to pass through each lip of the cervix into the cervical canal, so as to have two silk ligatures at the point where the future os uteri is to be, as otherwise the raw edges of the cut

vagina might unite, which would necessitate making an external os at a later day. The bases of the broad ligaments can be tied off with catgut, and almost all of the sutures about the cervix can be of this material. This is a decided advantage, as it is not desirable to make traction upon the perineum to remove these sutures for some weeks after the operation. In doing the colporrhaphy, when the oval denudation is made, the wound is closed usually with a running catgut suture placed in two tiers. Usually one or more silk sutures are introduced to act as stays. In operating upon the pelvic floor, the upper sutures are of catgut and the lower ones of silk. This obviates the necessity of removing the upper sutures, which embrace only the cut vaginal walls, and which are used only to help in narrowing the vagina. Silk is used in suturing the torn ends of the muscles and for the external sutures. The ones in the skin are removed in a week, those in the vagina after two weeks.

It is wise to treat patients having procidentia for some weeks prior to their operation. The uterus should be repositied and kept in its position by means of tampons. In order to secure this object it is at times necessary to put the woman to bed. In very bad and long-standing cases of procidentia, the mucous membrane of the vagina loses its proper character, and becomes very much like skin. It is of decided advantage to reduce the procidentia and to treat the condition with glycerin tampons, which helps to restore the parts to a more nearly

normal condition. After the operation it is best to keep the patient in bed for at least two weeks, and preferably for three weeks, and then to permit only a very gradual resumption of her ordinary occupation. Such patients should be cautioned against straining or lifting, and should be informed that it requires some weeks for a wound to become thoroughly consolidated.

It is, perhaps, wise, in this connection, to say a few words about the use of the pessary for procidentia. Excepting those rare cases in which the procidentia has occurred in spite of the fact that the pelvic floor is intact, the use of the pessary for this condition is clearly illogical. A pessary can never restore a torn pelvic floor; and if this accident has been the cause of the procidentia, any treatment except the repairing of the injury is clearly illogical, and can be only of temporary value. The pessary is a useful instrument in the treatment of slight descensus and of retroflexion of the uterus when the pelvic floor is intact. The pessary should be supported from below, partly by the vagina itself and largely by the encircling slips of the levator muscle. It should never get its support from the pelvic bones, which is what happens when a large pessary is introduced to hold up a procidentia when the pelvic floor is widely torn. Used under these circumstances, a pessary must be large in order to be retained, and when it is large it invariably presses against the pubic bones. It is only necessary to point out how illogical this use of the pessary is in order that its application may be condemned.

Does Gonorrhœa in the Female Invariably Prevent Conception?¹

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SHERMAN, TEX.

It has long been known that gonorrhœa in the female was sometimes attended with complications that proved troublesome and of serious import. Hunter recognized gonorrhœa as a cause of ovaritis and peritonitis. That gonorrhœa produced inflammation of the uterus, Fallopian tubes, and ovaries, resulting in sterility, was believed in the days of Meigs and Hodge we have evidence, but to what extent was not appreciated.

Authors have for many years been describing endometritis, metritis, inflammations of the tubes, ovaries, and peritoneum, produced by an ascending specific vaginitis, these structures being invaded by the poison slowly creeping up through the cervix, involving first the mucous membranes in its track, and extending by continuity of structure to the deeper tissues. The more serious results, however, were not appreciated nor so well understood until within recent years; not, indeed, until laparotomy became so common an operation and the pathology of the more important sequelæ were studied from the specimens themselves.

For many years ovaritis, inflammations of the Fallopian tubes and endometrium were known to be a cause of sterility, and yet the important part which gonorrhœa played in this con-

dition was not so generally accepted as it is at present, nor until long after Næggerath published his views in Germany in 1872, and in this country in 1876, directing attention to the serious results attending an attack of gonorrhœa, and who claimed that 90 per cent. of sterile women are married to husbands who have suffered from gonorrhœa either previous to or during married life; even then it was not accepted by the great majority of the profession. But investigations began, and slowly the light dawned upon facts sufficient to establish the existence of the serious complications that so often follow a gonorrhœal infection. Writers generally, however, condemn Næggerath's views as being too sweeping, and yet most of them are inclined to admit the conclusions to a considerable extent, and some few accept the original views *in toto* without condition.

Berutz called attention to these conditions as far back as 1850, but they were considered fanciful, and were not acquiesced in by the profession at large. We find Bumstead writing in 1868 that "as a general rule gonorrhœa in women is confined to the external organs of generation or does not extend above the cavity of the cervix, but cases are sometimes met with in which the internal surface of the body of the uterus is involved or in which there is true metritis. In exceptional instances, also, the in-

¹ Read before the Southern Surgical and Gynecological Association, 1893.

flammation may extend to the Fallopian tubes and even by continuity of tissues to the peritoneum."¹

Professor William Goodell is quoted by the *American Gynecological Journal* as having said that "personally he could not recall a case in which a woman bore a child after suffering with gonorrhœa."

Sinclair writes that "women who have suffered from gonorrhœal perimetritis are barren," and Schwartz coincides fully with Næggerath's views. Now, it seems to me that a very important question arises—viz., does gonorrhœa in the female invariably prevent conception?

It is, I think, well established that gonorrhœa is liable to and does sometimes result in endocervicitis, endometritis, salpingitis, ovaritis, perimetritis, parametritis, and occasionally general peritonitis. It is also well known that nearly all of these conditions arising from any cause whatever can and do cause sterility. Even a simple endometritis and inflammation of the uterine appendages from puerperal septicæmia and other non-specific causes will often result in this condition. But, does every woman who suffers from gonorrhœa become barren? The answer to the question, it seems to me, resolves itself into whether or not the complications, apart or all of them already referred to, are invariable accompaniments or follow an attack of gonorrhœa, and if so, if to the extent of preventing conception? The mucous membrane of the vulva and vagina are the first structures to be affected by gonorrhœa, and it is often confined to them. I believe that most men who have

treated this affection in women have observed that while it produced severe vaginitis, in many cases it did not extend to other structures and was cured. I am well aware that an acute attack may seem to be cured, the vagina and uterus appear to be in a healthy condition, while the poison may be latent to all intents and purposes, yet slowly and insidiously creeping up to the other important structures ready to bloom out at the least provocation.

It is not safe to pronounce a woman cured until many months have elapsed, and in order to arrive at the truth the cases should be kept under observation and the results in the condition of the pelvic structures noted, and especially with regard to pregnancy. It is not claimed that vaginitis alone from any cause will prevent conception. An interesting, though somewhat difficult, question would be, in what per cent. of cases is gonorrhœa limited to the vulva and vagina?

I am quite sure I have known some cases who had a specific vaginitis and who treated themselves for an ordinary leucorrhœa without professional aid, and not having any suspicion of its specific nature, and who, at a subsequent period, while being treated for some other trouble, casually described the vulvo-vaginitis, and whose husbands confessed to having had gonorrhœa, which gave the clue to the diagnosis; these women afterwards became mothers.

Endocervitis and endometritis from any cause will in many cases produce sterility, and yet some women will conceive while suffering from these troubles in a marked degree.

I have known a woman to bear a child who had suffered in this way.

¹ Bumstead, Venereal Diseases.

The canal of the cervix, from inflammatory adhesions, had become so small that I could not pass the finest probe, and whose menstrual periods were attended with great difficulty and great pain. When she was delivered at term, it became necessary to incise the cervix, which could not be sufficiently dilated to permit the head to pass.

In many of these cases, where the cervix is plugged up with a thick mucous discharge, the spermatozoa cannot gain entrance, and in salpingitis, where both tubes are affected and the ends are sealed by the inflammatory action, sterility is inevitable.

In ovaritis and perimetritis, the same result is looked for; the functions of the ovaries are suspended or destroyed, and they are bound down by adhesions. On the other hand, if only one ovary and one tube are involved, and both on the same side, as is most likely, conception can and does take place, the opposite side, of course, being healthy.

It is not impossible for this condition resulting from an ascending gonorrhœa, though it may be rare.

Martin, of Berlin, reports fifty-five gonorrhœal cases, in only about one-half of which were both tubes affected. I have recently delivered two women in whom I thought this condition existed. In the acute stage of all these conditions it is not likely that the woman will conceive, the discharges being liable to destroy the spermatozoa and ovule, and when profuse wash them away. The condition of the mucous membrane is such that the ovule, if impregnated, could not find a lodging place. The hyperæmic state occludes the canal of the cervix and tubes, and prevents the en-

trance of the spermatozoa and the ovule.

If the ovary has been severely inflamed with a peritoneal involvement binding it down by strong adhesions, it very rarely, if ever, recovers its lost function, is liable to remain enlarged, assume a chronic state of inflammation, and continue in this condition during all the child-bearing age, a constant source of distressing trouble, and, of course, rendering the woman sterile. The tubes, however, may be attacked with a specific inflammation and suffer for some time with some accompanying discharge, irritating the endometrium already affected by the same poison, keeping that structure in a hyperæmic condition, but which may in time subside, the discharges cease, and if the ovaries are in full function, the uterus in fairly good condition, the ends of the tubes not closed up, conception is possible, and frequently under such circumstances does occur. It is astonishing sometimes in what a complicated state of affairs conception does take place, and it is also surprising that at other times in apparently trivial conditions it does not take place.

Dr. R. B. Maury, writing of pelvic peritonitis from gonorrhœal and other causes, makes the following statement: "Although this form of pelvic inflammation often entails many untoward results, such as atrophy of the ovaries, obliteration of the tubes and fixation of the uterus in a false position, and, in consequence of them, disorders of menstruation and sterility, yet it is not uncommon after the severest attacks, in which life for a time hangs by a thread, to see recovery complete and all the sexual functions re-established. Menstrua-

tion again goes on normally, adhesions undergo absorption, the womb recovers its proper position and conception occurs."¹

Writers are not a few who declare that chronic gonorrhœa in the male will produce the same condition in the female, involving the uterus and its appendages, causing all the serious troubles produced by the acute stage, and I think this, too, is now an established fact. I have myself had satisfactory clinical evidence of such results. A man thinking himself cured of his gonorrhœa, having possibly months afterwards only a slight blennorrhœa, may be, often is advised that it is harmless, marries and contaminates his wife, setting up the same train of symptoms we frequently find in acute attacks. But in many of these cases where the husband, suffering from a gonorrhœa or gleet, infects his wife, and, as is generally the case, there is a period of latency, and during this period the woman, being otherwise healthy and near the menstrual epoch, will conceive before the outbreak of the inflammation is manifested, she may go on to full term and be delivered of a healthy child.

Dr. Coe writes that "chronic oöphoritis of secondary origin is more common than the primary form."²

It may be safe to say, as Sinclair does, that women who have suffered from peritonitis are barren, and I think the tubes are generally included in this condition; but I believe there are exceptions even here. As before stated, conception may occur where only the mucous membranes of the uterus and Fallopian tubes are involved, and they recover without

stenosis, the ovary not having been seriously affected.

Emmett¹ states that "when inflammation has been once produced in the tubes by cold or gonorrhœa, it never subsides during the generative life of the ovaries, but leads to sterility and other troubles."

According to the experience of our best authorities it is so difficult to positively differentiate between gonorrhœal and severe simple vaginitis without a clear and authentic history, it being attended with the same symptoms and the properties of also infecting the male, that it is not altogether an easy task to say when these ovarian and tubal and uterine troubles, even with the presence of the Neisser gonococcus, have a specific origin, especially as simple vaginitis will sometimes produce them all. Some prominent writers, however, deny that non-specific vaginitis possesses this tendency to extension.

I have observed quite a number of women who were the victims of gonorrhœal infection,—many of them innocently so,—having contracted it from their husbands, and believed it to be an ordinary leucorrhœa. Many of those whose history I was enabled to follow afterwards bore children, for many years were apparently healthy, and gave no evidence of the usual complications. The following cases will illustrate some of these conditions and results:

CASE I.—In this case the husband thought he was cured of a gonorrhœa after six weeks' treatment. He married and infected his wife in about two weeks, who came under my observation a few days after the attack began.

¹ Mann's Gynæcology.

² Ibid.

¹ Emmett, Diseases of Women.

She suffered with severe vaginitis and some urethritis, but made a good recovery; had two children when I last heard of her; no abortions and no complications after five years had passed.

CASE II.—The husband had several attacks of gonorrhœa before marriage, one being complicated with orchitis, and he had a very tight stricture. He married a healthy woman, who remained apparently in that condition, but did not conceive for five years. She gave no history of gonorrhœal infection or other uterine trouble. About that time her husband was operated on and relieved of his stricture. She conceived a few months after this, and has had up to the time I last heard of her, several years ago, five children.

CASE III.—The husband was a young man, 26 years of age; had four attacks of gonorrhœa. In the last attack he suffered more or less for about eight months, was treated first by a local physician for some time, then spent three weeks at Hot Springs, Ark., where he was treated during that time, and thought he was cured; returned to his home, and in a few days the discharge reappeared. He was exceedingly anxious to be relieved, as he was engaged to be married and the time was approaching. He went to Chicago, remaining about ten days, thinking again that he was cured after treatment there, but the discharge returned about the time he arrived at home, and he was thoroughly discouraged. I was consulted more as to the propriety of his marrying than about treatment. He was very emphatically advised not to marry, and the possible consequence very plainly laid before him. After

several weeks' treatment the discharge ceased, and, contrary to the advice received, he did marry, the discharge returning during the first week of that event, and infected his wife, who suffered severely for a time, but made a good recovery and has borne three children; now nursing the youngest. While she had some endometritis after her first confinement, it disappeared after a little treatment, and there seemed to be no evidence of any other trouble. She is now, I think, a healthy woman.

CASE IV.—This woman married a man who had had an attack of gonorrhœa some time previous to marriage. She gave a history of having contracted it from him, but was cured and had four children subsequently. She died from the effects of a fibroid tumor of the uterus some three or four years after the birth of her youngest child. Her husband lived a dissolute life for several years following her death, had gonorrhœa twice and an attack of orchitis. He got apparently well, married a young girl, who contracted the disease, recovered and has had two children; is now nursing the youngest.

CASE V.—A man, 36 years of age, contracted a gonorrhœa which gave him trouble. He did not recover rapidly, and, not knowing the danger before recovery was complete, married a widow, 27 years old, with one child. Very soon after marriage his wife became infected and suffered from a severe vaginitis. Before this she was a healthy woman. Then they lived apart for three months; both recovered, and this woman afterwards bore two children, and so far as I know is now healthy.

A number of other similar cases

could be cited, but these are sufficient for illustration. I will now relate two cases that had a different termination:

CASE VI.—A healthy woman, 24 years of age, married a man who was suffering from a gleet discharge at the time of marriage. He infected his wife, who had a severe vaginitis, which proved obstinate but finally subsided, but her subsequent menstrual periods were scant and painful. Her general health failed. She suffered greatly for three or four years; never conceived. The uterine appendages were removed from a mass of adhesions, and the tubes contained pus.

CASE VII.—A widow with two children married a man suffering from gonorrhœa. She conceived soon after marriage and bore him one child, but has been an invalid since, some five or six years having elapsed.

It does not seem to have been accounted for why one woman should have a severe vaginitis and get well promptly without complications, while another with a less severe inflammation may suffer from an extension of an ascending specific disease, when both are of the same origin. There may be some condition of the uterus and possibly the general system rendering one case more susceptible to this extension than another, or can there be a difference in degree of the contagious principle, or, instead of the disease spreading from the vagina to the uterine mucous membrane, does the virus pass through the cervix into the cavity during the act of coition, or, following along with the spermatic

fluid, there find a lodgement and light up the inflammation? These are questions that I think have not been settled. This, however, makes no material difference, and I presume, so far as the results are concerned, it is hardly probable that a positive knowledge of these questions would serve in any way to prevent the ultimate consequences.

That gonorrhœa does frequently prevent conception is probably well established, but I do not think it is by any means a universal rule. Clinical illustrations are too many to the contrary.

If Nægerrath's statements were literally true, sterile women and fruitless marriages would be far more common and the increase in the race would be greatly lessened, for there are a surprisingly large percentage of men, judging from my experience, who, if they confessed the truth, have suffered at some time in their lives with gonorrhœa. In regard to this question, Dr. Keyes makes the following statement: "Gonorrhœa is certainly very uncommon among respectable women, and particularly common, according to my experience, among respectable men."¹ This statement is from the pen of a man of large experience in this field. Neither can I believe that women are infected in every case by husbands who have a chronic gleet discharge, because many cases could be cited where men having gleet have married women who remained healthy and bore healthy children.

¹ Dr. E. L. Keyes, Wood's Library, 1880.

SOCIETY PROCEEDINGS.

Southern Surgical and Gynæcological Association.

Abstract of the Proceedings of the Sixth Annual Meeting, held in New Orleans, La., November 14, 15, and 16, 1893.

FIRST DAY—MORNING SESSION.

THE Association convened in the assembly room of the Medical Department of Tulane University, and was called to order by the President, Dr. Bedford Brown, of Alexandria, Va., at 10 A.M.

Prayer was offered by Rev. B. M. Palmer, of New Orleans.

An address of welcome was delivered by Dr. Ernest S. Lewis, on behalf of the local profession, which was responded to by President Brown.

The first paper read was a

MEMORIAL ADDRESS ON EPHRAIM
MCDOWELL,

by Dr. L. S. McMurtry, of Louisville, Ky.

The author said that the galaxy of illustrious names would be incomplete without that of McDowell, the father of ovariectomy and the pioneer of abdominal surgery, which in modern times has grown to such grand proportions.

In the year 1852, twenty-two years after the death of McDowell, Professor Gross, in his report on Kentucky Surgery to the Kentucky State Medical Society, presented a sketch of the life of this eminent surgeon, with a detailed account of his original surgical work. This sketch was subsequently incorporated in Gross's American Medical Biography, published in 1861.

After giving a sketch of McDowell's life, Dr. McMurtry referred to his first ovariectomy, on Mrs. Crawford, and noted some points with reference to his operative technique. The operation in this case was done without an anæsthetic. The incision was made to the left of the median line, about three inches external to the rectus muscle, and was nine inches in length. After opening the peritoneum he first tied the pedicle with a strong ligature, and then cut open the tumor and removed its contents. He then divided the pedicle, it having been previously tied, and removed the sac. As soon as the incision was made into the abdomen, he states, "the intestines rushed out upon the table," and were not replaced until the operation was completed, which, he adds, "occupied twenty-five minutes." He then turned the patient upon the left side to allow all fluids to escape. He closed the incision with interrupted sutures and brought out the ligature attached to the pedicle at the lower angle of the wound.

In reporting his cases, he omits mention of the material composing the ligature, and Dr. McMurtry has been informed by a friend of McDowell, now dead, who was a great deal about McDowell's office in his boyhood, that the ligatures used were

made of shoemaker's thread and waxed thoroughly before being used. Adhesive strips and bandages completed the dressing, and in the author's language, he prescribed "a strict observation of the antiphlogistic regimen." The special features of the technique are: (1) The incision was made through the muscular layer of the abdominal wall three inches external to the rectus muscle; (2) the cyst was not evacuated until after the pedicle was tied; (3) an effort was made to cleanse the peritoneum of fluids; (4) drainage was sought, as well as escape of ligatures, by bringing the ligatures out at the lower angle of the incision; (5) the operation occupied only twenty-five minutes, expedition being more the result doubtless of the want of an anæsthetic than otherwise.

In his report of the second case, McDowell used this language, "I laid her side open." In his third case he adopted the median incision, saying in his report of this case, "I changed my place of opening to the linea alba." In all of his cases he ligatured the pedicle before separating the adhesions or tapping the tumor. In his third case he mentions that the ligatures could not be released for five weeks, at the end of which time the cord was taken away.

Dr. Howard A. Kelly, of Baltimore, Md., read a paper entitled

THE DIAGNOSIS OF PELVIC INFLAMMATORY DISEASES,

in which he called attention to certain common sources of error in making diagnoses of pelvic inflammation. An erroneous conclusion is often reached in these cases both by the general practitioner and the specialist, by

relying for the diagnosis upon such symptoms as dysmenorrhœa, more or less persistent pain in the pelvis, attacks of pain confining the patient to bed, diagnosed as "peritonitis," difficult locomotion, cachexia (due to morphia habit), tenderness on pressure over the right ovarian region, and extreme tenderness at the vault in a vaginal examination.

Such a group of symptoms frequently characterizes a false or *pseudo-pelvo-peritonitis*, in which there is actually no demonstrable lesion of any pelvic organ.

In order to make a diagnosis of true pelvic inflammatory disease the inflamed structures *must be examined directly by touch*.

The various subjective symptoms just detailed must be regarded as of secondary importance in reaching a diagnosis.

Even the patient's observation that she has passed a quantity of pus cannot be relied upon unless the pus is seen by the physician, as patients often mistake muco-purulent discharges from the uterus for the emptying of an abscess.

Fever, and especially recurrent attacks of fever, are valuable aids in making the diagnosis, but fever is generally absent, even in abscesses where the pus is encapsulated.

The direct examination, the sole test, is made by the vagina, or by the vagina and lower abdominal wall, and the diagnosis of pelvic inflammatory disease is made when a definite, hard, resisting mass is felt on one or both sides of the cervix. Through an empty rectum these masses are still more distinctly outlined. When the disease is not quite so evident, a bimanual examination through the rec-

tum and abdomen should be made, carrying the index finger of the lower hand above the rectal pouch behind the uterus and laterally out on to the broad ligaments. The most minutely-accurate examination of the pelvic organs which can possibly be made is called for when the ovaries and tubes are enclosed in delicate bands of adhesions, which allow considerable mobility to structures not enlarged.

This is accomplished by the trimanual method by *vagina, rectum*, and *abdomen simultaneously* under *anæsthesia*.

Dr. Kelly exhibited his corrugated tenaculum to facilitate this examination. The point of the tenaculum is caught in the anterior lip of the cervix, which is drawn down to the hymen, and the tenaculum is held between the third and fourth fingers and the ball of the thumb, while the index finger is introduced into the rectum, and aided by the hand making pressure above, giving a plane of resistance, he is enabled to examine minutely the posterior surface of the uterus and all surfaces of the ovaries and tubes, detecting the slightest adhesions binding these organs down.

The examination under *anæsthesia* is a matter of the utmost importance and not sufficiently appreciated. With *anæsthesia* the most accurate examinations are possible. It is, therefore, a *sine qua non* to the diagnostician.

RÉSUMÉ.

In conclusion, Dr. Kelly recapitulated the important points he wished to establish, as follows :

(1) His remarks are addressed for the most part to the general practitioner.

(2) The history of the patient and

sensitiveness over the ovarian regions, whether by deep abdominal or vaginal palpation, can but rarely *per se* establish a diagnosis of pelvic inflammatory disease.

(3) An attempt to make a diagnosis without directly palpating the disease is at best but more or less clever guess-work.

(4) The diagnosis can be made with certainty when resisting masses are felt choking the posterior half of the pelvis at the sides of and behind the uterus.

(5) It is possible in this way to mistake a retroflexed fundus, an extra-uterine pregnancy, a myoma, or a carcinoma for inflammatory disease. The error, however, will be in the right direction and not to the injury of the patient when she comes into the hands of the specialist.

(6) For a more delicate appreciation of the exact condition of the pelvic organs, and in most cases in order to make the diagnosis at all, a bimanual examination by rectum and abdomen under *anæsthesia* is indispensable.

(7) The trimanual examination, acting at the same time by rectum, vagina and abdomen, is the most delicate method of all, serving to detect the slightest irregularities in uterus and ovaries, as well as the most delicate adhesions.

(8) Finally, constant practice, utilizing every available chance, will alone enable a man in general practice to appreciate these points so simple to the trained touch.

Dr. C. Kollock, of Cheraw, S. C., followed with a paper entitled

THE CONSERVATIVE TREATMENT OF PYOSALPINX.

He said that in cases of pyosalpinx

much caution and a very careful and rigid examination are called for to determine the cause of the presence of pus, the length of time it has been there, and the condition of the walls of the tube in which it is found. Attention should also be given to the peritoneum and ovaries, but above all there should be the strictest inspection of the endometrium, a disordered condition of which contributes much to the production and continuance of pus in the tubes.

Within a year or two changes have been made in the treatment of pyosalpinx, and conservatism now enters largely into its management. Men of high position in the profession are more decidedly agreed that a moral obligation rests upon us to relieve patients without the sacrifice of any organ, or part of one, when this is compatible with safety. Recently, Polk, Pryor, Krug, Boldt, and Dudley had reported to the New York Obstetrical Society a number of cases of pyosalpinx treated by the conservative method now in vogue. This treatment, when faithfully carried out by curettement and aseptic divulsion, has not only been successful in saving the tube and ovary on the non-affected side, but in several instances the diseased tube was entirely relieved of the presence of pus. That many cases of pyosalpinx have been accurately diagnosed and radically cured without the mutilation of any part of the sexual organs, is well authenticated. Dr. Kollock's experience, while limited compared to that of others, has been sufficient to convince him that the conservative system of practice is bringing us to that period when the mutilation of women, once supposed to be necessary, should cease.

He then reported a few cases of pyosalpinx which had fallen into his hands, the happy termination of which had placed him under obligations to the pioneers in the conservative treatment. All but one of four cases were relieved entirely without resorting to celiotomy.

Dr. George J. Engelmann, of St. Louis, emphasized the importance of administering an anæsthetic in examining patients with pelvic inflammatory disease before serious operative procedures are entered upon. It was not alone the anæsthetic, however, but the *practised* touch.

Dr. Joseph Price, of Philadelphia, alluded to "dropsical tubes" as being a group of cases that puzzled the practitioner from a diagnostic point of view, and later surgically. Angry pus cases, while acute in their early history, were simply cases to be dealt with surgically. The attacks of pain were numerous, and fixation and tenderness characteristic symptoms. Everything in the pelvis was board-like, and when the surgeon got into the abdomen from above it was difficult to distinguish the uterus from the appendages, and *vice versa*. These were trying cases to deal with.

Dr. John D. S. Davis, of Birmingham, Ala., said he was in favor of evacuating pus wherever it was found in the body. There were, however, some cases in which pus could be removed without sacrificing the ovaries or tubes. As to the use of an anæsthetic, he considers it absolutely essential in the examination of doubtful cases, but where the diagnosis is plain it is not necessary.

Dr. R. B. Maury, of Memphis, said the great difficulty in the class of cases referred to by Dr. Kollock, in

which there was pelvic inflammation associated with muco-purulent discharges from the uterine cavity, was to decide whether there is pyosalpinx.

We have what is denominated endometritis, associated with abnormal discharges and exudation in the pelvis, but Dr. Maury says he is at a loss sometimes with the most careful diagnostic measures, whether under ether or without it, to form in his own mind an accurate picture of what the precise state of things is in the pelvis. The rule he has laid down in the treatment of such cases is, if they are acute, non-puerperal or puerperal, that the woman is entitled to a certain period of rest and other measures non-surgical before deciding upon a radical operation.

Dr. W. E. B. Davis, of Birmingham, Ala., believes that in the examination of patients, it is exceedingly difficult in some cases to make an accurate diagnosis without an anæsthetic. However, there were women who could stand the examination well without it. In regard to endometritis, by judicious and careful curettement he believes many patients can be saved the necessity of an abdominal section. The trouble is that practitioners often denounce one procedure and uphold another without outlining the indications for a certain position. It is very important to cure the endometritis before it spreads to the tubes, etc.

Dr. R. M. Cunningham, of Pratt City, Ala., was inclined to look upon endometritis in the vast majority of cases of disease of the appendages as the *fons et origo* of the whole affair, and he believes that the operation which has been systematized and popularized by Dr. Polk is a safe,

conservative and reliable procedure. Furthermore, in the hands of the general practitioner it would relieve many of those cases that go to the laparotomist.

Dr. Bedford Brown, of Alexandria, Va., said the mobility of the uterus and its fixations were questions of great importance in diagnosing pelvic inflammatory disease.

AFTERNOON SESSION.

THE INCISION IN ABDOMINAL SECTION —HOW TO CLOSE IT—POST-OPERATIVE COMPLICATIONS ABOUT IT.

Dr. Joseph Price, of Philadelphia, read a paper on this subject. He said the question that most vitally concerns surgical and gynæcological work was, "How can the mortality be reduced?" Surgical judgment and surgical fingers repeatedly determine the issue of life or death.

The Incision.—We have nothing from which we can even approximately determine to what extent the length of the incision influences the mortality. The statistics of comparative results would not prove satisfactory, for the reason of the entry of so many other complicating elements; adhesions, their character, extent, and locality. That the incision exercises a greater influence than is generally recognized or admitted, he entertained little doubt. In his own experience he finds the balance of both convenience and safety to lie with the short incision. The short incision narrows the limits of hæmorrhage. It is safe to begin with a small incision, and where the size and character of the tumor, or complications present, require a larger one, it can easily be made. Very much abdominal work

can be done through an opening admitting only two fingers. The reliance of the abdominal surgeon must be largely in educated fingers. In the majority of cases an operation can be done through a small incision without the operator or spectators seeing viscera. Universally adherent, irreducible or solid tumors require a long incision for delivery and for dealing with complications that can be dealt with only through a long incision, those beneath and on the sides of tumors. In the majority of cases, to so enlarge the opening as to obtain a view of the parts is to augment the risk of ventral hernia and provoke tedious convalescence.

The importance of a perfect closure of the incision has only recently received that attention it deserves. The effort should be to approximate, as nearly as possible, normal conditions, anticipating and dealing with all existing or possible complications with scrupulous minuteness and care, thus guarding against those accidents which are too frequent. He would not pretend to suggest uniform procedures to be carried out in all cases, as each operator has his own way and does his own work best that way, and it would not be possible for him to apply the methods of others safely and successfully without special training. He is satisfied that the exposure and manipulation of the incision, as well as the peritoneum, is harmful. Incisions bathed in pus and filth, and freely manipulated, often refuse to unite. Suppurating wounds are largely due to careless closure or to tight sutures, including too much tissue. Tight suturing is too common, and has destroyed life in many feeble subjects. Suppuration due to tight su-

turing and stitch-hole abscesses, in all sections, where they do not result fatally, prolong convalescence. Cases were cited in point.

Through and through suturing, including all structures, more of the central structure than skin or peritoneum, with either silkworm gut or pure silk, gives and continues to give the most satisfactory results. Silkworm-gut seems to be the favorite material at present, as it possesses all the natural and essential qualities of a suture, is small, strong and non-irritating—the three cardinal virtues of all good suturing material. Terracing of sutures has nothing to recommend it; on the other hand, Dr. Price believes it prolongs an operation. Retraction of skin and peritoneum by the introduction of silkworm-gut sutures gives inclusion to more central structures and the least possible tension on skin and peritoneum. Keith, Tait, and Bantock, all use a fine straight needle, and their work has been about perfect. The use of large, curved, cutting needles is harmful; their use primarily favors hæmorrhage and secondarily stitch-hole abscesses.

Dr. Kelly thinks that long incisions have little or nothing to do with mortality, except in an indirect way. Where there are many adhesions a long incision is necessary. Handling of the viscera in pre-antiseptic days increased the chances of suppuration, and, consequently, of peritonitis and death. The chances of infection, he believes, are greater with a long incision. Hernia comes from improper closure of the abdominal wall, or the use of the drainage-tube, weakening the abdominal wall at one of its points.

Dr. L. S. McMurtry, of Louisville,

demonstrated his method of suturing on the board. He brings peritoneum to peritoneum, muscular structure to muscular structure, fascia to fascia, skin to skin, and says the least quantity of interposing material that we have between the tissues that are to be brought together the better. He disagrees with Dr. Kelly that the drainage-tube is the cause of hernia after closing the incision.

Dr. R. B. Maury, of Memphis, favored the silkworm-gut suture. His experience covers nearly three hundred sections, and he has simply used the through and through suture. He has had almost no abscesses, and the fewest possible number of herniæ, which, he says, can be counted on the fingers of one hand.

Dr. T. J. Crawford, of Memphis, said it was considered that all hernias resulting from abdominal section were due to failure to get union between the opposing layers of transversalis fascia. He uses a long curved needle instead of a straight one. With it he can put in stitches in one-third of the time he can with the ordinary needle. He has used it in upward of 200 sections, and has not had a case of hernia following one of them. He has also had the fewest number of stitch abscesses.

Dr. Price, in closing, said there was an immense amount of theory about the matter of long and short incisions, and there was a tendency on the part of some to brush aside pre-antiseptic work. Notwithstanding this, however, some of the old back-numbers, or hay-seeds, so-called, had as good results in their day as are obtained in some of our hospitals today. He urged great caution in the terracing method of suturing.

Dr. George J. Engelmann, of St. Louis, Mo., read a paper entitled

THE VAGINAL ROUTE AS COMPARED
WITH THE ABDOMINAL FOR THE
REMOVAL OF PELVIC VISCERA.

Dr. Engelmann desired to call the attention of the Association to the advantages offered by the vaginal route for many of the operations, and especially some of the more dangerous now practised, by means of abdominal section for the removal of the uterus and appendages, and especially in suppurative cases with multiple pus centres. It was vaginal hysterectomy for malignant disease of the uterus which first paved the way to the more extended use of the vaginal route for such operations. He pays a fitting tribute to American surgery when he says that this, like other of the great operations of recent times, emanated from a Southern surgeon. In New Orleans, in 1846, Dr. Dubourg fully described this operation, which he had repeatedly practised with success since 1829. But it was again forgotten until revived within the last decade, and vaginal hysterectomy for malignant disease of the uterus is now everywhere an accepted operation, which is rendered especially safe and rapid by the *forci-pressure* method of Péan, and it was the French surgeon who extended the field to the removal of other contents of the pelvis by the vaginal route, resorting to the piecemeal removal, the *morcellement*, for the extirpation of masses too large to be delivered in their entirety through the vaginal opening. The leaders in this new departure are Péan and Ségond, of Paris, Doyen, of Reims, and Jacobs, of Brussels, followed for

the present by the French school only. In Germany and England these operations are practised but little, if at all, and in this country the vaginal route is limited to the removal of the uterus, vaginal hysterectomy, for malignant disease, and, perhaps, for prolapse or inversion.

Isolated cases of removal of prolapsed ovaries resting on the vagina, or small and conveniently situated ovarian cysts, through the vaginal opening, are now and then performed everywhere, but this is a very different matter. The surgeons who are leading in this field vary somewhat in method and in the extent to which they apply it, but the vaginal route now serves them (1) for hysterectomies for the removal of malignantly diseased uteri, and moderately enlarged uteri; for hysterectomy by *morcellement* for uterine tumors which do not extend above the navel. (2) For all bilateral removals of appendages with diseased uteri. (3) For the treatment of pelvic suppuration of all kinds. (4) Dr. Jacobs even prefers the vaginal method for certain cases in which the appendages on one side only are to be removed. Péan limits the hysterectomy by *morcellement* to benign growths, and to all cases of pelvic suppuration treated to-day by laparotomy; whilst Ségond still prefers laparotomy when operation is indicated in unilateral cases, above all in unilateral salpingo-ovaritis when non-suppurative.

The indication given by Terrier, and endorsed by Jacobs, is first to resort to the vaginal route for cases in which suppurative pelvic peritonitis has returned after laparotomy has already been practised; secondly, suppurative pelvic peritonitis

with fixation of the uterus and multiple pus sacs, whilst laparotomy may be resorted to in enucleable non-suppurative salpingo-ovaritis. It is the operation of choice in pyosalpinx with serious affection of neighboring tissues, and a necessity in pelvic suppuration with multiple centres, in which hysterectomy by *morcellement* gives by far the best chance for a cure. These operations, when removal of the uterus accompanies them, are in their first stages identical with vaginal hysterectomy, as is generally known, but *forcé* pressure aims to take the place of the suture to permit rapidity of operation. Diseased or greatly-enlarged uteri and tumors are removed piecemeal with no appreciable loss of blood, the spurting vessels being controlled by hæmodynamic forceps, or by the forceps of Péan or clamps, and cutting in the mass of tissue, likewise following the compression of superimposed tissues by powerful volsella constructed for the purpose. In the same manner non-enucleable masses are removed throughout the pelvis. The success of the operation, in the hands of its enthusiastic advocates, is surprising. Péan reports sixty cases without a death, while Ségond, who met many desperate cases, has four deaths in thirty-two; Doyen two in fifty cases of vaginal removal of fibroids, and four in twenty-eight extirpations by *morcellement* of uterus, appendages, and pyosalpinx, complicated with fibroids or pelvic suppuration; and Jacobs, of Brussels, 125 cases with only two deaths, which cannot in any way be attributed to the operation itself. In this country the results of hysterectomy, as practised for the removal of cancer of the uterus, are not good.

Baldy recently published four cases, with two deaths, and Montgomery twenty, with one death. Previously reported statistics have been more favorable.

The advantages of the vaginal route are the rarity, if not absence, of shock, in cases in which we would have to treat it if the abdominal method were resorted to; rapidity of operation, by reason of the *forcé* pressure method, and the total absence of ligature or suture, the nearness of the parts to the finger, and, in the aggravated pus cases, guarding of the abdominal cavity from the pelvis proper, or the field of operation, by the adhesions and inflammatory products, which form a perfect barrier. It seems the natural route for the reaching of parts below the pelvic brim. There is, after operation, perfect drainage established by the forceps and the dressing, per vaginam, so that there is no possible stagnation. Recovery appears to be more rapid and more satisfactory than by the abdominal method, the forceps being removed in forty-eight hours, the patient sitting up on the fifth or sixth day, and moving about between the tenth and fourteenth, when cicatrization is completed.

The removal of tumors extending as high up as the umbilicus can be accomplished only by the expert operator, and such cases are left to his choice; but vaginal hysterectomy by *morcellement* should be resorted to in bilateral pyosalpinx, where foci or centres of infection often remain in the endometrium, or in the stumps of the tubes, and by all means if multiple pus centres exist in the pelvis. These are the cases in which the superiority of this method over the

abdominal is most evident. If the entire pelvis is infiltrated, all that is possible must be removed, but by reason of the excellent drainage no harm is done if an adherent piece be left here and there.

In concluding, Dr. Engelmann paid a high tribute to the young Brussels surgeon, Dr. Jacobs, whose skill and success had demonstrated to him the advantages of this method, and he cites even cases in which unilateral pyosalpinx had been removed without combining hysterectomy, and in which pregnancy and healthy labor followed, indicating that hysterectomy is by no means a necessary accompaniment of operation by the vaginal route. The writer urges a fair trial to be given this method by the American gynecic surgeon, and pledges himself to resort to it in all possible cases, but warns his *confrères* not to attempt operation without proper instruments, the long and short retractors which are necessary, and, above all, the powerful volsella and long-bladed hæmostatics of Péan for *forcé* pressure.

Dr. James A. Goggans, of Alexander City, Ala., read a paper entitled

THE DIAGNOSIS OF SOME ABDOMINAL TUMORS SUPPOSED TO BE OVARIAN.

He said the first requisite of the abdominal or pelvic surgeon is to acquire the ability to make a diagnosis. Our text-books often lead one to believe that this was quite an easy thing to do, and he had noticed that a few writers had, in referring to their diagnoses of a series of abdominal sections for different diseases, stated that no mistake in diagnosis was made in the whole series. The author's experience does not lead him

to believe that the diagnosis of many abdominal tumors is always such an easy thing to do. He then reported a few cases which had come under his observation, which served to illustrate the fact that the diagnosis of many cases is often difficult, and in some quite impossible.

A woman, 25 years of age, was taken with pelvic pain after the birth of her first and only child. This pain continued for two years before the abdomen began to enlarge, and at the time he saw her and removed the tumor the abdomen was extremely distended. The physician in charge had tapped her three times, and had withdrawn large quantities of thin fluid, and was very positive in his diagnosis that an ovarian cyst existed. The abdomen was so full of fluid that all the landmarks were obliterated. Dr. Goggans, consequently, could not make a positive diagnosis. However, he recognized it as being some obscure form of pelvic disease, and opened the abdomen for its removal, finding a large quantity of ascitic fluid, which escaped, when a small dermoid cyst was found floating in the pelvis. The patient made a perfect recovery.

Dr. John T. Wilson, of Sherman, Texas, read a paper entitled

DOES GONORRHOEA IN THE FEMALE
INVARIABLY PREVENT CONCEPTION?

He said it has long been known that gonorrhœa in the female was sometimes attended with complications that proved troublesome and of serious import. Authors had for many years been describing endometritis, metritis, inflammations of the tubes, ovaries, and peritoneum produced by an ascending specific vaginitis, these structures being invaded by the poison,

slowly creeping up through the cervix, involving first the mucous membranes in its tract, and extending by continuity of structure to the deeper tissues. The more serious results, however, were not appreciated, nor so well understood until within recent years, when laparotomy became so common an operation, and the pathology of the more important sequelæ were studied from the specimens themselves.

For many years ovaritis, inflammations of the Fallopian tubes and endometrium were known to be a cause of sterility, and yet the important part which gonorrhœa played in this condition was not so generally accepted as it is at present, nor until long after Noeggerath published his views in Germany in 1872, and in this country in 1876, directing attention to the serious results attending an attack of gonorrhœa, and who claimed that 90 per cent. of sterile women were married to husbands who had suffered from gonorrhœa, either previous to or during married life. Even then it was not accepted by a great majority of the profession. According to the experience of our best authorities it is so difficult to positively differentiate between gonorrhœal and severe simple vaginitis without a clear and authentic history, it being attended with the same symptoms and the properties of also infecting the male, that it is not altogether an easy task to say when these ovarian, tubal, and uterine troubles, even with the presence of the *Neisser gonococcus*, have a specific origin, especially as simple vaginitis will sometimes produce them all.

He had observed quite a number of women who were the victims of gon-

orrhœal infection, many of them innocently so, having contracted it from their husbands, and believed it to be an ordinary leucorrhœa; many of those whose history he was enabled to follow afterwards bore children, for many years were apparently healthy, and gave no evidence of the usual complications.

Dr. Wilson then reported cases illustrative of some of these conditions and results. That gonorrhœa does frequently prevent conception is probably well established; but he does not think it is by any means the universal rule, clinical illustrations are too many to the contrary. If Noeggerath's statements are literally true, sterile women and fruitless marriages would be far more common, and the increase in the race would be greatly lessened, for there are a sur-

prisingly large percentage of men, judging from his experience, who, if they confessed the truth, have suffered at some time in their lives with gonorrhœa.

The following officers were elected for the ensuing year:

President: Dr. Cornelius Kollock, of Cheraw, S. C.

First Vice-President: Dr. A. B. Miles, of New Orleans, La.

Second Vice-President: Dr. J. B. S. Holmes, of Rome, Ga.

Secretary: Dr. W. E. B. Davis, of Birmingham, Ala.

Treasurer: Dr. H. P. Cochran, of Franklin, Tenn.

After introducing and adopting resolutions of thanks, the association adjourned to meet in the city of Charleston, S. C., third Tuesday in November, 1894.

Society Reports.

DR. JAMES F. W. ROSS,¹ of Toronto:

Mr. President, I presume I have been asked to discuss Dr. Peck's paper on account of the fact that last year I put nearly all the members to sleep in reading a lengthy paper on ectopic gestation. I wish first to congratulate Dr. Peck on the excellence of his paper. I have seldom listened with so much pleasure to the relation of carefully recorded histories of cases. What impressed me with considerable force, as I listened, was the fact that we are unable to decide at all times

at what period the cases rupture. The next to the last case narrated by the author was on the verge of the grave, and yet made an excellent recovery.

In my paper last year I stated the fact, and I do so again, that there is no simpler operation in the range of abdominal surgery than that for the removal of an ectopic gestation, or tubal gestation, which has ruptured in the second and third month. A novice in the operation is much alarmed, owing to the large amount of blood in the abdomen. If he will remember one cardinal point, and that is that he is going into the abdomen to tie a

¹ ANNALS OF GYNÆCOLOGY AND PÆDIATRY, January, 1894, page 190.

bleeding vessel, and that it is to be controlled by pressure on the tube near the cornu of the uterus, his hesitancy will at once cease. He will be rendered much bolder by that fact in going down to the cornu of the uterus to grasp it, he is thus able to control the hæmorrhage, and subsequently to wipe out the old blood, see what he is doing, and not pass the ligature in the dark. If I were called to a supposed case of ruptured ectopic gestation, and had nothing but a pocket-case containing three or four pairs of forceps, a lancet, and a piece of absorbent cotton, I should not wait to go home to get my instruments, but would insist on operating at once.

The necessity for washing out has not been proved in these cases. One gentleman has operated on a case in which the abdomen was filled with blood, and, having nothing but dirty water, he was afraid to use that, and consequently left the blood there, but the patient made a splendid recovery. I think it is better, however, to wash out the cavity. The cessation of hæmorrhage and external outlet to discharges from the peritoneum in a great many cases will relieve peritonitis. It was only three days ago that I expected one of my cases was going to die. She had all the evidences of peritonitis. I took out the drainage-tube twenty-four hours after the operation, and hesitated what to do. I took out the stitches, reopened the lower angle of the wound, put in a drainage-tube, and the next morning the temperature came down.

Regarding the question of impregnation in these cases, that it crosses from one tube to the other inside the uterus I do not believe. It is not necessary for the ovum to go into the

uterus and across to the other tube. I believe that it wanders from one ovary, goes behind the uterus and falls into the open end of the opposite tube in such cases. The method in which the ova enters the tube in the fowl is the same, and if we can understand it in the fowl we can understand it in the human being.

The author, I think, acted wisely in waiting in one case for reaction to set in before operation, and saved his patient. If he had operated at the time of shock the chances are that he would have lost her. I think it is important to remember that usually after a period of shock and a period of convalescence, and another period of shock and another period of convalescence, in the rapidly fatal cases we are likely to have some amelioration in the symptoms by waiting. What produces the shock has been a mystery to me. I had one case of undoubted rupture of extra-uterine pregnancy where the patient was going around with an abdomen full of blood without evidence of shock. The case has already been reported. I suppose it is the blood in the peritoneum that produces the shock, just as we have shock from the rupture of an ovarian cyst, although, occasionally, such extravasation may occur and no shock result.

One point in the diagnosis, and that is this: These cases simulate either ovarian cyst with twisted pedicle, a ruptured pus-tube, or appendicitis, and the main point in the diagnosis was the finding of the mass behind the uterus, the peculiar treacly, tarry blood excreted from the vagina, and the missing of the monthly period. In one case the period was irregular. The symptom cannot alone

be relied upon. If you get a sudden onset of indefinite symptoms in the pelvis, for which you cannot account, together with a mass in the neighborhood of the uterus and a discharge of treacly blood, you are dealing with a case of extra-uterine pregnancy. It is a safe rule, if you have a case that puzzles you with a discharge of blood from the uterus and a boggy, pelvic mass, to make a diagnosis of extra-uterine pregnancy, and you are almost sure to be right. The author said he removed one of his patients two or three hours before operation. If we can avoid doing this it is better to do so. It is not necessary to get a nurse if you can secure a brother practitioner for the time being and until such time as a nurse can be procured. In one of my cases, I believe peritonitis was produced by decomposition of the foetus. There is undoubtedly many a case of pelvic abscess that opens into the bowel, rectum, or vagina that has its origin in the decomposition of the foetus in ectopic gestation.

DR. WILLIAM WARREN POTTER, of Buffalo:

Without entering into the discussion of this subject *per se*, for the admirable paper is beyond criticism, one thought occurs to me in connection with it,—namely, that it is somewhat remarkable that the author of the paper should have seen so many cases and operated on them successfully within so short a period. That one fact points out a lesson which I simply wish to draw attention to in a little more emphatic manner. Ectopic pregnancy is a common condition,—much more so than until lately was considered to be the case. It is only

within the last few years that we have come to appreciate that fact. It is generally the practitioner in the remote district who sees these cases first, and it is he who must sound the alarm, and he should either be prepared to operate promptly himself, or persuade his patients to obtain the nearest competent surgeon. These are cases in which there is no time to sacrifice, if they are to be saved. Waiting is dangerous. It is prompt action that has characterized the operator in the cases that have been reported. It is a lesson that we may take home to ourselves and give it our most serious, thoughtful attention. His only fatal case was one in which he was compelled to wait until physicians in Cleveland could be summoned. They came not, but previous time was lost—mayhap, disastrously. Dr. Peck is to be congratulated on his splendid record.

DR. M. ROSENWASSER, of Cleveland:

Dr. Potter has called attention to the frequency with which these cases occurred in Dr. Peck's practice, and I will say it is due partly to the fact that the practitioners in his neighborhood have been educated to detect this condition much earlier than in most places. Ectopic pregnancy is much more common than is usually supposed or is claimed by our textbooks. We are very apt to run to the other extreme, and advocate operative interference when cases do not require it. Some cases have evidence of rupture, and, recovering from shock, get better in two or three days and resume their work, to be a second time prostrated. A physician is called, makes a diagnosis of rupture in the early stage, puts the patient to bed,

and says the case is one that requires operation. The operation is refused. The hæmorrhage may be limited to a clot, and the clot become absorbed. The patient recovers in four or six weeks without operation. If the diagnosis is not made and the patient again gets up and about in a day or two, she is likely to have recurrent hæmorrhage, especially if the foetus is not dead. One of the author's cases might possibly have recovered without operation. She got up once, had symptoms and then got secondary hæmorrhage. There was no immediate urgency for operation, neither a high temperature, a rapid pulse, nor any other indication. It is not an easy matter to distinguish between those cases of free hæmorrhage which end rapidly in death and those which become encysted, or in which there is hæmorrhage into the broad ligament, in which the hæmorrhage is controlled and the blood becomes absorbed. Dr. Ross has called attention to a case in which operation was performed and the blood not removed from the abdomen, yet the patient recovered. We have these occurrences in ordinary hæmatocele, which are in most cases extra-uterine pregnancy.

DR. ROSS:

I had one case where the clot suppurated and subsequently ruptured, in which there was acute peritonitis.

DR. J. HENRY CARSTENS, of Detroit:

It seems to me it is a dangerous thing to leave a foreign substance in the abdominal cavity which is liable to cause trouble. In the present state of our knowledge of abdominal surgery, it is safer to remove it as soon as we make a diagnosis.

I wish to congratulate Dr. Peck on the excellent work he did, and to call attention again to the point made by Dr. Potter with regard to the frequency of ectopic gestation. The fact of so many cases occurring in a comparatively small town in Ohio indicates that many cases are occurring all over the country that are undoubtedly not recognized. We should preach in and out of season the frequent occurrence of extra-uterine pregnancy, and insist on their diagnosis by the general practitioner.

DR. PECK:

I cannot agree with Dr. Rosenwasser in regard to Case No. 2. She might have progressed nicely for a short time, but eventually would have succumbed to operative interference. I believe every pathological mass in the pelvis should be removed early. During this same period there have occurred in our city three other cases, operated upon by different operators, making a total of eight sections, with seven recoveries and one death.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of January 4, 1894.

THE PRESIDENT, DR. BARTON COOKE HIRST, IN THE CHAIR.

THE FIRST AMERICAN SYMPHYSEOTOMY.

BY ROBERT P. HARRIS, M.D. (See p. 249.)

DISCUSSION.

DR. G. BETTON MASSEY :

Did I understand the doctor to say that these cases did not present lameness after the operation? I should like to know if the symphysis unites, and what is the nature of the union; whether it is simply a fibrous union or not?

A CASE OF SYMPHYSEOTOMY. BY

RICHARD C. NORRIS, M.D. (See p. 253.)

DISCUSSION.

DR. ROBERT P. HARRIS :

I believe that the doctor was correct in selecting symphyseotomy. He probably would have lost his patient if he had performed a Cæsarean section at the end of eighty-nine hours.

As to the statement that the separation is greater in multipara, we must understand that when the operation is performed upon a primipara, it is the first time that the separation has occurred. In one reported case a separation of two and three-fourths inches occurred in a primipara. In that case the child was a male weighing eleven and three-fourths pounds. Some cases in primiparæ where the separation has been over three inches have been reported. The degree of separation depends upon the increase of pelvic calibre required for the passage of the head.

DR. CHARLES P. NOBLE :

I have had a curious experience with regard to insanity after operations. No such patient

has become insane after the removal of the ovaries, with one exception, and she had been insane prior to operation. I have had three or four cases that have become crazy after sewing up the perineum. I think that in every case it was brought about by the tormenting desire to urinate, caused by an infected bladder. They all recovered when the cystitis got well.

DR. RICHARD C. NORRIS :

We all know that during pregnancy there is increased mobility in the joints of the pelvis, which is thought to be more pronounced in multiparæ than in primiparæ. If a woman who has had several children comes to have her symphysis opened, it seems to me that from the fact that the pelvic joints have been accustomed to separate physiologically several times previously, they would be more yielding under the pressure of the advancing child, and thus permit greater separation at the symphysis.

In my own case, I had no knowledge of the kidney disease. She was in a desperate condition, and I think fortunately for the patient I did not do Cæsarean section. So far as the child's life is concerned, Cæsarean section would have increased its chances.

In regard to insanity following operations and its connection with affections of the bladder, I myself believe that the insanity occurring after operations is that which Dr. Wood has described as confusional, due to a depressed vital condition on the part of the patient and not dependent upon anything in the operation *per se*. The operation is, as it were, the last straw that breaks the camel's back. My own patient was strongly predisposed to insanity, and the operation was sufficient to so depress the balance that she lost her reason. I am glad to say that her mental condition has largely improved. I

saw her to-day, and she recognized me and called me by name, the first time since the occurrence of her mental confusion. I feel convinced that the bladder disease alone is not to blame for the change in her mental condition.

PROCIDENTIA UTERI. BY CHARLES P. NOBLE, M.D. (See p. 270.)

DISCUSSION.

DR. G. BETTON MASSEY :

I have been much interested in the accurate statement of the doctor as to the mechanical conditions present in the production of procidentia. All of us must conclude that the mechanical conditions here are paramount. But he has hardly laid sufficient stress upon one accompaniment of procidentia, hyperplasia of the uterus. I hardly think that it is possible for procidentia to occur—certainly it has not done so in my experience—without there being hyperplasia of the uterus. It is true, as he says, that in the bulk of cases there is relaxation of the pelvic floor, but he enumerated some cases that could occur in the virgin. Certainly in these cases there is no rupture of the pelvic floor, yet in the majority of cases there would be found this hyperplasia. In these cases the proper treatment would be to arrest the condition before the production of such marked disease as to demand operation. It is to be noted that the treatment described is directed toward the most pronounced cases. I conceive that much should be said in regard to the moderate cases where retroversion or the first degree of prolapse exists. The fault there is the want of recognition of some of the recent developments of bacteriology. Here we have unquestionably microbic invasion as the initial lesion, a microbic invasion of the mucous membrane of the uterus, resulting in hyperplasia. Therein lies the indications for the most valuable treatment, one instituted in time for the arrest of the microbic condition and the cure of the hyperplasia that results from it.

DR. HARRIS A. SLOCUM :

Without taking more than a moment, I should like to say that hyperplasia is not always the cause of procidentia, as Dr. Massey thinks. About two weeks ago I saw a

patient, 43 years of age, who had had two children. The uterus was outside of the body. It could be felt as readily as a finger in a glove, and measured one and a half inches in length, and was of the thickness of the thumb. In this case procidentia was certainly *not* caused by an enlarged uterus.

DR. JOSEPH PRICE :

I wish to briefly allude to the prominence given to the broad ligaments in some of these cases of procidentia. Some authors have claimed that the broad ligaments have little to do with the support of the uterus. I am satisfied that they would revise this statement if they did a few vaginal hysterectomies.

Again, in regard to hyperplasia, sub-involution and defective involution. It has been my experience to find that these conditions are secondary, not primary in a large number of cases. For instance, posterior displacement takes place with some descensus and with obstruction to the return of the venous blood, and the defective involution is really secondary, and not primary. It is these injuries in the pelvic floor referred to in the paper that favor the retroflexion and descensus, and the increased size is due to the obstruction to the return of the venous blood. In these cases if the patient is put to bed, and the uterus placed forward, and at a high circulation level, the hyperplasia and increased size subsides quickly.

The references in the paper to the importance of the primary operation I agree to with one exception,—that is, in regard to delay in the primary operation. It should be done as Emmet and others have suggested, beginning in the vagina and working toward the external perineum. It should be done thoroughly, and not in the loose way that has been practised for so many years. If done in this way, and done promptly, the pelvic floor has quite as much resiliency and strength, and supports the anterior wall as thoroughly as if it had never been torn. Operations twelve or twenty-four hours after the injury are not successful, and should not be practised or taught. I should rather counsel not closing it than to do it after twenty-four hours. A secondary operation will give a more perfect result. Sphincter tears are as a rule sagittal, and in such cases it is exceptional to find procidentia. This week I had two sphincter

tears to close, and I paid particular attention to this point. The support that remained in the posterior wall of the vagina was still sufficient to prevent descensus. Attempts had been made in both cases by good operators to close the lacerations only a few hours after delivery, failure resulting in both cases, notwithstanding the suturing was done with care and without bad symptoms following.

DR. G. BETTON MASSEY :

I wish to ask Dr. Price if he ever knew of a case of procidentia that had not had a discharge from the uterus at some time in its history,—some endometritic discharge. I think the answer would be, if each case was thoroughly investigated, that no such case existed without this endometritis. The importance of the inflammatory and catarrhal nature of all of these instances of enlargement and misplacement of the uterus is much lost sight of, and it is my judgment that if surgeons paid as much attention to the action of microbes under these circumstances as after operation, they would resort oftener to earlier treatment rather than to subsequent operation. The very statement that Dr. Price just made that a delay of twenty-four hours interfered with the success of a primary repair of the perineum to my mind bears out the statement I have made. Why should a delay of twenty-four hours be fatal to success? Because opportunity has been afforded for microbic invasion of the recently-torn surfaces.

DR. JOSEPH PRICE :

In my practice endometritis is scarcely ever found. In extirpation of the uterus I look for it but fail to find it, whether the operation is done for malignancy or for fibroid disease.

I would add that I disagree with Dr. Noble in regard to the amputation of the neck, for that permits the fundus to fall over backward, and will cause much suffering. It is important to put the uterus high and forward, and in the absence of the cervix this is impossible except by fixation methods.

DR. NOBLE :

I would ask Dr. Price the grounds for his statement, that unless a laceration is united at once it will not heal. How many cases has he seen operated on at the end of twenty-four hours?

DR. JOSEPH PRICE :

I see a good number, and they are all failures. My ground is that of a prolonged and practical experience in a huge clinic. I saw two this week closed by members of this society, and even these two are sufficient to convince me that when the operation is done by men skilful with the needle and scissors, the result is not satisfactory.

DR. CHARLES P. NOBLE :

I have dwelt upon the subject at such length in the paper that I have little to add. With reference to the point suggested by Dr. Massey the whole trend of the paper is at variance with his assumption that the weight of the uterus is a factor of importance in the causation of procidentia. I stated that I have seen but one case of procidentia where the cause was not laceration of the pelvic floor.

With reference to what was said by Dr. Price concerning immediate perineorrhaphy. Formerly I sewed up lacerations of the perineum at once, when I was tired out and the patient exhausted, and when the proper instruments were not at hand. The last dozen of perineas that I have sewed up after labor have not been done within twelve hours of the labor, and I have never had cases do better. As Dr. Price has seen only two cases in which union has not taken place, and as he has not operated himself under the conditions laid down, and moreover, as he fails to assign any reason why union should not take place, whereas I have had a dozen heal *seriatim*, I still think that the plan advocated is wise.

DR. NOBLE :

Exhibition of Instruments. Adjourned.

HARRIS A. SLOCUM, M.D.,
Secretary.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

ORIGINAL COMMUNICATIONS.

Malnutrition from Chronic Gastro-Intestinal Catarrh;
Diphtheritic Paralysis; Œdema of the Face;
Mitral Disease Following Rheumatism.¹

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GENTLEMEN:

The first case I shall present to you to-day is a boy, aged 8 years, who is brought here because he has no appetite and has been losing flesh for some time.

As a baby he was robust and well nourished. He was fed on the breast until he was weaned at the age of 18 months. He was in good health until he was 2 years old, when he had pneumonia, and again at the age of 3 years. There have been no other illnesses.

For the past year he has been falling off in weight; his appetite has been much impaired, and he finds it very difficult to retain his urine. In fact, he wets his clothes frequently, as well as passing his water in the bed at night. I find that of late he has been drinking large quantities of tea. He sleeps fairly well. His bowels are regular. Occasionally he has some flatulent distention of the abdomen.

Now, looking at him, we are struck at once by his appearance. He is evidently what may be called a delicate child, whose health has been

¹ A clinical lecture delivered at the Hospital of the University of Pennsylvania.

steadily failing. It is just such cases which are difficult to understand and treat, for it is so hard to discover what is the matter with them. In such a case as this we must go farther than the patient himself, and inquire into the family history.

We find that the father enjoys good health, and the mother also is healthy, with the exception of dyspepsia. There are two other children, one older and one younger, both being in good health. About five or six years ago the mother had some pulmonary trouble, but from her subsequent recovery and her present appearance, there is no reason to suppose that there was any tuberculosis about it.

In making these inquiries it is always important to notice the date of the beginning of disease in the parent. Even if the mother, at the present time, had pulmonary tuberculosis which began five years ago, the chances of the child being tubercular also would be much less than if her malady had existed at the time of its birth. Of course, the tendency for him to develop the disease which she had afterwards shown might have been inherited by him, but not, I think, to so great a degree as it would have been in the first case. Moreover, we must remember, that too much stress must not be laid upon the existence of a tuberculous ancestry, important as it is. With a disease so dreadfully prevalent as this, there are few families in which some member has not fallen a victim to it.

I have gone into this matter rather *in extenso* because we naturally wonder whether this boy's failing health can be due to tuberculosis of any form. A variety of tuberculosis sometimes seen in children is *tabes mesenterica*,

or tuberculosis of the mesenteric glands. The principal symptoms of this disease are extreme emaciation, marked distention of the abdomen, fever, and, if the intestines are also involved,—as they commonly are,—diarrhœa. The enlarged glands can only be felt after the disease is well advanced, and often not even then; and yet they are the only positive diagnostic sign. You can readily see that the diagnosis of the affection cannot usually be made with any certainty. This child has no such emaciation and abdominal distention as we should expect in mesenteric tuberculosis, he has no diarrhœa, and is apparently free from fever. I do not think we have any reason to attribute his impaired health to such a cause.

He has twice had pneumonia, however, and we do not know the cause of this. Occurring in a child 2 years old it was in all probability a bronchopneumonia, and this disease not unfrequently leaves a favorable soil for the growth of the tubercle bacillus. But a careful examination of his lungs has failed to show us any evidence of trouble there, and he certainly has no pulmonary symptoms.

We certainly cannot attribute the wasting of this boy to the enuresis, for it is highly probable that the latter condition is the result and not the cause of the wasting. Indeed, we should make a great mistake here if we viewed the enuresis as more than a secondary matter, a symptom merely, and gave our chief thought to its treatment.

The heart has been carefully examined and found normal. Sometimes a congenital heart lesion prevents the proper development of a child, leaves him anæmic and poorly framed, and

yet shows no distinct cardiac symptoms. The food the boy takes seems to agree with him, and his bowels are stated to be regular, but this latter point requires a more careful study. In fact, I feel that the whole question of the condition of his digestion requires a more careful study, for I am inclined to think that his troubles are due to some affection of them.

We wish to know positively that his bowels are quite normal, both in frequency of evacuation and in character. We want to know whether he is liable to pass mucus with his stools. We wish to discover how frequently present is the flatulent distention of the abdomen of which he complains, and whether it is made worse by any special kind of food. We must have his temperature taken regularly, that we may discover whether he has fever, which would account for his loss of appetite, or whether the loss of appetite is, perhaps, an index of a catarrhal state of the stomach and small intestine.

The case is, evidently, not a clear one, and we must watch it for a time before a positive diagnosis can be made.

The condition of the boy is clearly one of malnutrition, which is, I believe, dependent upon a mild chronic gastric catarrh, the result of improper and insufficient nourishment. He has been drinking tea to excess, with but a small quantity of milk in it, and the tea has taken the place of wholesome food.

You all know how frequently tea is used by adults, and especially by women, to replace food. It warms the stomach, relieves the sense of hunger, and is somewhat stimulating; but it soon upsets digestion and nu-

trition and ruins the nervous system. This boy, we learn, is fond of sweet things, and occasionally has some distention of the stomach. We will, therefore, stop all tea and coffee and allow him nothing sweet and nothing which has been fried. He can have a wholesome diet of meats and almost all vegetables. Theoretically, we should cut off his starchy food, but often we must abandon this very desirable regulation for the sake of not diminishing too greatly the amount of nourishment which a patient will take. When the appetite is much impaired, as in this case, we must humor it a little at the expense of what is actually best. Later we can reduce the amount of starch if necessary. We shall encourage him to drink plenty of milk. For his evening meal he must eat but little and drink almost nothing. With this precaution his enuresis will probably improve without medication. We shall give him a bitter tonic with an alkali, such as,—

R.	Sodæ bicarb.,	gr. ii.
	Tr. gentian. co.,	
	Tr. cinchonæ co.,	āā f3ss t.i.d.

I find alkaline bitters, such as the above, particularly useful in the chronic gastric disturbances of children. You observe that we have given him nothing for his enuresis, although it is a troublesome symptom. It seems to me that in the debilitated state of his health it would be folly to devote much attention to the condition of the bladder. If the abstinence from fluid at night and the improvement of his general health, for which I hope, is not attended by amelioration of the vesical trouble, we must later treat it directly.

CASE II.—This child is two years

old, and is brought here on account of its nasal voice. She had diphtheria a few weeks ago, which does not seem to have been a very severe attack and was apparently only pharyngeal.

The mother seems rather uncertain as to the exact date on which the diphtheria began and just when it ended, but she states that about a week ago, after recovery seemed complete, the child began to speak in this peculiar nasal tone, and that in a few days more she choked while taking food.

Now, this is not an uncommon sequel of diphtheria, usually occurring from three to five weeks after the beginning of the disease. It is a palatal palsy which gives the child this peculiar voice. The soft palate hangs down and will not respond to tickling, since its mucous membrane is anæsthetic. The naso-pharynx is imperfectly cut off during deglutition and, as a result, fluids often come back through the nose. If the muscles of the pharynx are also paralyzed, swallowing becomes difficult and food may enter the larynx and cause choking.

Diphtheritic paralysis may occur after mild cases of the disease as easily as after severe ones. There are various forms of them. That, perhaps, most frequent, although it can hardly be called a paralysis in the strict sense of the term, is the loss of the knee-jerk. It is surprising in how many cases the knee-jerk will be found absent during convalescence from the diphtheria. The loss of motor power may never go beyond this point. The most frequent actual paralysis is that of the palate, as seen in this case, or of the palate and pharyngeal muscles as well; and the

next is the paralysis of various eye muscles, as shown by the tendency to ptosis, squint and so on. Sometimes diphtheritic paralysis becomes very wide-spread and may affect the extremities and other parts of the body. A very frequent and dangerous form of diphtheritic paralysis is that of the heart. This may cause sudden death at a time when the patient is apparently recovering nicely from the diphtheria, and the hopes of the family and the physician are at their highest. We are, indeed, never safe in making a prognosis in diphtheria for weeks after the disease is over. The greatest caution must be observed in allowing a child to get out of bed, or even suddenly to sit or stand up in it during convalescence. The prognosis of diphtheritic paralysis, other than the cardiac form, is usually good.

As to treatment, it is an open question whether we can do much for the trouble, for it is highly probable that nature effects a cure in the majority of cases. However, it is always our duty to use every means at our command, and it seems that the liberal use of strychnine gives the best results. This should be given in increasing doses until the limit is reached and, when possible, should be administered hypodermically. This child will be given $\frac{1}{120}$ gr., t. i. d., by the mouth, increasing the dose until we see some definite effect.

CASE III.—The next case is a very puzzling one. It is that of a little girl, aged six years, who comes here complaining of puffiness of the face. She has never been very strong; had measles at the age of four years, and two months ago had a mild attack of scarlet fever. For a month she has

had paroxysms of coughing, during which she becomes red in the face and sometimes vomits. She has never had the "whoop" of whooping-cough, but her brother has it. There seems to be no doubt that she has whooping-cough. She is subject to a cough in winter; always has a poor appetite, and sometimes pain in the stomach. Her bowels are opened daily, she has no fever. She becomes tired easily, and when excited or frightened gets blue in the face, and once last summer nearly lost consciousness. The tension of the pulse is not excessive, and examination of the heart shows that organ to be normal.

Repeated examinations of the urine have failed to show either albumen or casts.

In this case the diagnosis at first seemed clearly to be that of scarlatinal nephritis, but there are several things against this. The child has pertussis; and puffiness about the eyes is not at all uncommon in that disease. A very important matter in this case, however, is that the puffiness is stated to have commenced soon after the scarlet fever, and before the whooping-cough began. We can therefore exclude the latter disease as the cause of the œdema.

You see that the child is poorly nourished and has a bad color. Can this puffing of the face be due to her general debility and anæmia? I am of the opinion that it can. We have all seen adults, and sometimes children, who show a puffing about the eyes at certain times when they are indisposed from some slight ailment, and in whom an examination of their urine has never showed the existence of nephritis.

We will endeavor to improve this child's general condition. She has been taking Basham's mixture. We will continue the iron, but I do not think that a diuretic action is longer called for, so we will give it in the form of the carbonate, which is easily borne and will not be liable to upset her stomach. We will also give her a bitter tonic and try to regulate her diet, using care that she takes nothing but wholesome food.

I want to call attention to one fact in this connection, and that is that I have never yet seen the girl at a time when she has this œdema of the face of which we have been talking. I am sometimes inclined to think that it is a fancy of the mother, and I should very much like to see it for myself. It is never safe to take as positively true reports of this kind, and it is on this account that I am still more inclined to believe that she has no nephritis, and that perhaps the so-called puffiness is only an indication of lack of good health, and not even an actual œdema.

CASE IV.—I wish to show you, for just a moment, a case of endocarditis of the mitral valves caused by rheumatism. It is a condition, unfortunately, too common in children. In this case the rheumatism was severe, but the heart-disease can just as easily follow when the rheumatism is not severe, and perhaps has been almost or quite overlooked. Indeed, I am quite sure that there may be a rheumatic endocarditis without any articular involvement whatever. This girl is eight years old, and came to the dispensary a month ago complaining of pains in various parts of the body, both in the joints and in the muscles. Several joints were swollen

and very painful. The condition had already lasted four weeks. Her temperature at the time of her first visit was 100° F. and her pulse 140. She had never had any other disease to which endocarditis could be attributed, and had never had rheumatism before; yet she had when first seen a heart murmur identical with that which we hear to-day.

Upon examining her we find her apex-beat slightly displaced downward, and rather diffused. There is a slight thrill, which is diastolic in time. Percussion shows the right border of the heart at the right edge of the sternum, and the left border in the nipple line. Auscultation reveals a loud systolic murmur, heard over the whole mitral area. It is not heard at the aortic or at the pulmonary cartilages, but is transmitted clearly into the axilla. There is also a murmur occurring in the latter part of diastole, and heard only at the apex and close to it. The diagnosis here, then, is that of mitral obstruction and mitral insufficiency.

Besides rheumatism there are many other diseases of childhood which cause endocarditis, although none of them do it with anything like as great frequency. Chorea is a very common cause, but I include chorea among the forms of rheumatism. It is certainly connected with it very closely.

The prognosis in children is both good and bad,—good, because they sometimes recover from endocardiac lesions in a way which would hardly be possible in an adult; bad, because they are very prone to have repeated attacks of rheumatism, each one of which leaves the heart in a worse condition than before. As a rule the prognosis is much better after the age of ten years than before it.

In the case of this little girl we find perfect compensation existing. She has not a single cardiac symptom. There is no palpitation, no dyspnoea, cedema, cough nor cyanosis. If she does not have another attack of rheumatism, and if the cardiac affection stays as it is, her prognosis is good as regards the duration of life; and she may even have her heart lesion disappear to a considerable extent.

The best thing we can do for her in the line of treatment is to keep her on salicylates for a considerable time, even in the absence of articular pain, since we cannot be sure in so recent a case that the endocarditis is not still in an active state. It is very important, too, that she be kept as quiet as possible. Confinement to bed would be the best course, since we wish to spare her heart all the extra work which bodily exercise demands of it.

SOCIETY PROCEEDINGS.

New York Academy of Medicine—Section on Pædiatrics.

DR. HENRY D. CHAPIN, CHAIRMAN.

Meeting of January 11, 1894.

Dr. L. Duncan Bulkley read a paper entitled:

COMMON FORMS OF SKIN AFFECTION
IN EARLY LIFE, WITH THEIR DIAG-
NOSIS.

In analyzing a large number of cases of skin diseases, observed in public and private practice, more cases were found by the writer during the first five years of life than in any other similar period except that from twenty years to twenty-five years. During the second five years the number fell to one-third that of the first period. Among 8000 cases thus studied, 12½ per cent. were under five years. Of these, 80 per cent. were suffering from eczema. During the second five years, but 50 per cent. of the cases were those of eczema.

An important feature in symptomatology of eczema in young children is the excessive amount of itching present.

As to ætiology, the author believes local causes play an exceedingly small part in the production of eczema in childhood. Exactly what the constitutional state is which produces the eruption it is difficult to determine or formulate. Close observation seems to establish that the nervous system plays an important part in the matter in a direct manner, but chiefly by

means of various reflex disturbances. The eruption of the teeth undoubtedly, in some instances, causes an outbreak of eruption. It sometimes occurs with the appearance of the second teeth. When we remember the rapid development of the nervous system during the first five years of life, it is not difficult to understand how important the nervous element may be. That the disease may result from many different conditions does not admit of doubt.

Although eczema is the most common skin disease during the first ten years of life, other diseases are frequently seen. The order of these diseases according to their frequency is as follows:

Dermatitis	10 per cent.
Urticaria	5 "
Syphilis	5 "
Scabies	4 "
Tinea	2 "
Psoriasis	1 "
Zoster	1 "
Alopecia areata	1 "

Ichthyosis, impetigo contagiosa, hydroa, purpura, scleroderma in smaller proportions.

Under the heading "dermatitis" is included all inflammations of the skin due to local origin, such as intertrigo and the lesions caused by local irritants.

Dr. J. P. McGowan read a paper upon :

REFLEX SKIN DISEASE IN CHILDREN.

The paper was confined chiefly to what has been described as reflex neurotic eczema. The onset of this disorder is usually abrupt. The lesions are at first papules or papules and vesicles which are aggregated together, constituting a patch bearing a strong resemblance to the herpetic patch. It becomes infiltrated and elevated above the surrounding healthy skin. Pruritus is intense, and, as a result of scratching, weeping and crusting follows, and secondary infection may take place. When scratching has been prevented the patch is dry and red, and readily cracks. The localization of the eruption is invariable and the most characteristic symptom. It is symmetrical and involves primarily both cheeks. The forehead and skin may also be attacked and, in very severe cases, the scalp likewise. It rarely extends farther. It may, however, do so in severe cases if long continued. After the appearance of the lesions they vary in intensity from day to day. In some cases it is possible to see changes within the space of an hour. New papules and vesicles appear. The itching becomes more intense. After a day or two other portions of the face may become involved. A period of improvement follows in a short time when the disease seems to be getting well, only to be followed by a fresh attack. This form of eczema may appear at any age under two years, and in both sexes, and remains until the exciting cause is removed. Most frequently this cause is gastro-intestinal disturbance, or improper diet, either in

quantity or quality, or the poor quality of the milk of a nursing mother. Cases are reported by the author which seem to clearly point to phimosi, the irritation caused by teething and by a hernia. There is no one specific cause.

In instituting treatment a thorough examination of the patient should be made, and any exciting cause should be discovered and removed if possible. If successful in this, the management of the case is usually easy, for cure, as a rule, rapidly follows. As a local application, ichthylol is best. Ten grains to the ounce of ointment or paste may be used.

Dr. G. H. Fox read a paper on .

GENERAL METHODS OF TREATMENT OF SKIN DISEASES IN CHILDREN.

He strongly advocated internal as well as external treatment. Diseases of the skin are not local, and it would be as unreasonable to treat scarlet fever by simple external applications to the eruption as to treat eczema by external applications alone. A thorough examination should be made to determine the cause which should be removed if possible. This is the first and most important step in treatment. It is not, however, always possible to discover the cause. The child must, therefore, be put into the best general condition possible, that he may be able to withstand the influences which are at work in producing the skin disease. The regulation of the diet is of the utmost importance. A large percentage of skin disease in young children is due to errors in feeding. Proper regulation of the diet alone will go far in such instances in effecting a cure.

It is a serious error to treat all cases in a routine manner by means of arsenic. It does harm in many more cases than it does good. Of the numerous new preparations recommended for external use, very few are improvements over the old and established drugs. If some law could be passed forbidding the use of anything but oxide-of-zinc ointment in any eczema, much suffering would be prevented, none of the new preparations in drugs can take its place. It has, however, come into such common use among the laity that physicians are tempted to use other and less appropriate means, fearing that their patients will not be sufficiently impressed if such a common remedy is prescribed. During the last year or two the writer has used, with utmost satisfaction, impervious dressings. Vulcanized rubber cloth, made thin and yielding, forms an excellent dressing for almost any form of eczema. It is the only dressing that can be used alike in acute and chronic stages. Rubber tissue or rubber bandage is also an admirable means of treating skin disease. It should be very thin and soft.

Dr. Henry Koplik read a paper on :

ANAL FISSURE AND PAINFUL EROSIONS
OF THIS REGION IN INFANTS AND
CHILDREN.

These conditions are very frequent in infants and young children, but are usually overlooked. In certain cases examination will show separate radiating fissures from which a little blood may flow, and the physician may fear that he has caused tearing by his examination, but the fissures will usually show particles of foreign matter

showing that they are of long standing. In other cases but one or two fissures will be found a little higher up in the region of the sphincter. These lesions are extremely painful. The pain is developed by the passage of faecal matter and continues for sometime after. The child, therefore, unconsciously restrains the natural movement of the bowels, and constipation is almost the invariable rule. Constipation is both the cause and the result of fissures. They originate primarily from passages of hardened masses and in their turn cause constipation, owing to the excessive pain caused by any passage from the bowels. In such cases treatment of the fissure is sometimes followed by immediate and complete relief of the constipation. A cure is effected by a complete dilatation of the sphincter. This is too painful an operation to be undergone without an anæsthetic. Chloroform should be given and the sphincter should be dilated as far as possible. A tampon is then introduced and the bowels allowed to act of their own accord.

Dr. J. E. Kelly said that he had seen a case of psoriasis at four years. He had been strongly impressed with the frequency with which a lithæmia occurred in these cases. Treatment of the lithæmic condition was necessary in many cases to effect a cure. He approved of a bandage, but had found that moist cloths were sometimes fully as effectual. They protect from the air and accomplish all that is accomplished by the bandage.

Dr. J. Lewis Smith said that there had been a marked change of opinion during recent years among specialists regarding the constitutional origin of eczema. In a discussion, not many

years ago before this section, the dermatologists were inclined to rely upon local treatment. One other element in the treatment was the prevention of scratching. Unless this was done, cure was sometimes indefinitely postponed. He inquired whether any one present had seen the quinine eruption in a young child.

Dr. Bulkley said that he had never seen a quinine eruption under ten years.

Dr. Goldenburg referred to digestive disturbances as the most frequent cause in the production of skin diseases. He believed that the great frequency of such disturbances under five years accounted for the large number of patients seen by Dr. Bulkley during that period. He referred to a tubercular or scrofulous eczema,

which, he said, affected the lips and mucous surfaces around the mouth and nose, being in this respect unlike the reflex eczema described by Dr. McGowen.

Dr. T. S. Southworth described a form of skin disease seen in considerable numbers in dispensary practice. It is impetigo or pustular eczema, which seems due to local infection resulting from inoculation through scratching.

Dr. S. H. Dessau spoke of the great importance of recognizing the constitutional element in skin disease, and hence of using constitutional treatment.

Dr. J. H. Fruitnight reported a case of acute general exoriative dermatitis in a young infant. He believed this to be extremely rare.

ABSTRACTS FROM CURRENT LITERATURE.

Gastro-intestinal Septicæmia of Infants.

FISCHL (*Deut. Med. Woch.*, November 9, 1893) concludes, from a study of twenty-one cases, that the acute gastro-intestinal catarrh of infants, commonly observed in foundling asylums, and so fatal in its results, is in reality a manifestation of septicæmia. In ten cases bacteriological examination revealed, alike in those in which there was distinct gastro-enteritis and in those in which there was obvious septicæmia, pyogenic organisms; in seven the staphylococcus pyogenes albus, in one the staphylococcus pyogenes aureus, and in two the streptococcus pyogenes. The micro-organ-

isms were found most frequently in the lungs; next in frequency, in the spleen; then in the liver and kidneys. In many cases only slight changes could be detected in the gastro-intestinal canal with the naked eye, but in some there was intense hyperæmia. The number of micro-organisms in the bowel was small, and these were found in the superficial parts of the epithelium. The kidneys frequently showed parenchymatous inflammation, hæmorrhages, and minute abscesses surrounding colonies of micrococci. The writer believes that the lungs are primarily infected.

Whooping-Cough.

THEODOR (*Archiv f. Kinderh.*, B. xv, 5 and 6). Contrary to the general opinion, that one attack of whooping-cough confers permanent immunity, the author states that out of 353 cases, occurring during a period of five years, he has observed five cases where there was unquestionably a second attack. He does not consider it possible that they were relapses after an interval in which the symptoms were latent, but believes them to be cases of a second infection, because in two instances the children had had in the interval between the attacks pneumonia or measles, attended with obstinate cough; the latter, however,

had none of the characteristics of pertussis, which would have been the case had the whooping-cough been latent.

He does not believe that children are exempt from infection prior to the first dentition. He has seen it at the second, third, and fourth months; and of his own cases, 25 per cent. were under eight months of age.

In regard to treatment, he has employed successfully bromoform in ordinary doses, in children under one year old. When fever was present, antipyrine was added, and the latter was used exclusively in children under one year old. He also speaks favorably of the extract of hyoscyamus.

Peroxide of Hydrogen in Diphtheria.

WILLIAMS (*Amer. Journ. of Med. Sciences*, November, 1893) concludes from his studies of peroxide of hydrogen in diphtheria, that the solutions generally employed are not sufficiently strong. A solution containing over fifty volumes is required to kill the bacillus of diphtheria *in vitro* in ten seconds, which is the time allowed for the solution to act when used clinically. When the solution was slightly acid—0.25 to 0.50 per cent.—strengths of twelve to twenty-five volumes were equally efficient. The required strength can be obtained by evaporating a weak solution over a water-bath. A ten-volume solution evaporated to one-sixth of its bulk becomes a fifty-volume solution. The peroxide has a special advantage in that it disintegrates the false membrane, and thereby removes a source of infection, and moreover permits the access to the bacillus of any other

germicide, such as the hydrochloric or sulphuric acid of the solution. Since the peroxide does not attack sound tissue, it assists in the early recognition of this infectious process, or the involvement of new centres. Under its influence the false membrane becomes white and foamy. It may be applied by means of a swab or in the form of a spray. If the membrane is thick, the nozzle of a long thin syringe of stout glass may be pushed through the membrane and a few drops of the solution squeezed out.

The author lays considerable stress on the acidity of the solution, and states that experiments show that solutions of perchloride of iron have no greater germicidal power (*in vitro*) over cultures of diphtheria bacilli than solutions of hydrochloric or sulphuric acids containing the same quantity of acid.

Two Attacks of Scarlatina in Four Months.

The report of a second attack of scarlatina in three months (*Brit. Med. Journ.*, October 14, 1893) has led to the report of a similar case by Childe (*Brit. Med. Journ.*, November 11, 1893). C. W., aged 13, was attacked with scarlatina on March 13. The illness was moderately severe, the symptoms well marked and followed by desquamation. Recovery was complete in six weeks, when the patient returned to her home in the north. The apartments were thoroughly fumigated with sulphur, but were not white-washed or re-papered.

On May 8 she returned and occupied the same rooms as during her

previous illness. These rooms were also daily used by other members of the family, consisting of six children, none of whom had had scarlatina, and none of whom took it. They were in the room daily, but did not sleep there as the other child did. On July 13, C. W. was attacked a second time, the illness being rather more severe than on the previous occasion. There was slight albuminuria, which there had not been before, and the peeling was somewhat more copious. She recovered in six weeks. The probabilities are that she took the second illness from some poison left undestroyed by the previous fumigation.

Diabetes Mellitus in Infancy.

DUFLOCQ and DAUCHEZ (*Rev. de Méd.*, June 10, 1893) report a case of diabetes mellitus in an infant aged eighteen months, terminating rapidly by coma. The symptoms were great thirst, constipation, weak pulse, cyanosis, and emaciation. The illness was attributed by the mother to teething. After an illness of two weeks, it grew rapidly worse, became comatose, and died in a few hours. Under two years of age diabetes mellitus is extremely

rare, and the writers could find only two recorded cases of coma. Külz and Leroux have collected 150 cases of diabetes mellitus in childhood, and of these only nine were under two years of age. Berlioz, in 20,000 analyses of urine, detected sugar but once, and that was in the urine of a child $3\frac{1}{2}$ years old. The authors refer to the rapid course of diabetes in children, and compare it to an infectious disease.

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ORIGINAL COMMUNICATIONS.

Influences Affecting the Results in Abdominal Operations.¹

BY J. F. W. ROSS, M.D.,

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IT is not my intention to refer to the work or writings of others in connection with this subject. I have made a critical examination of the deaths occurring after abdominal operations in my own practice, and give you the outcome of a close observation of such cases. The observations have been as accurate as I could make them. It has been my custom to preserve an accurate record of each case.

When a fatality occurs, an operator should at once ask himself the question, Could this termination have been prevented? The influences affecting the results of abdominal operations may be discussed under four heads,—

(1) The influences inherent in the patient.

(2) The influences closely connected with the character of the operation.

(3) The influences due to the atmosphere and surroundings of the place in which the operation is performed.

(4) The influences brought to bear upon the patient by the details of the after-treatment.

First.—The influences inherent in the patient.

I heard a surgeon say recently, and I was glad to hear it, that no matter what aseptic or antiseptic precautions are used in certain cases in clean surgical wounds, pus is occasionally found. I have contended for this for some time. No doubt, pus occurring in a wound may be due to carelessness on the part of the operator, or to some impure condition of the air at the time of the operation, but it

¹ Read before the New York State Medical Society, February 7, 1894.

may also be due to some condition inherent in the patient. Were surgeons more accurate in expressing some of their opinions, we would learn that they have pus—it may be in a very small quantity—in their wounds oftener than they believe. A busy surgeon has scarcely time to watch each wound for two or three weeks after it is made, and a stitch-hole abscess may develop even at such a distant date.

Conditions of the patient affecting the result of abdominal operations, or of any operation, are scrofula, anæmia, malarial poisoning, poisoning from bad drainage and impure drinking-water, and perhaps a condition produced from eating improper or insufficient food. In such cases the system is unable to provide the proper barrier against infection, and, as a consequence, the wound does not heal kindly, and the patient does not do well from the very first.

I have watched two cases side by side in the same institution, with the same disease, the same operation having been performed for the relief of that disease, and the one patient has died and the other patient has recovered. These were two cases of pus-tubes, with rupture of the tubes, and escape of pus into the peritoneal cavity at the time of the operation in each case. Each was washed out; in each a drainage-tube was used. In the one case adhesions formed around the drainage-tube with rapidity, and remained organized; in the other, either no adhesions were formed or they were so slight that they rapidly broke down again. The leucocytes were evidently in an unhealthy condition in the one case, and were unable to keep the poisonous material out of the system;

in the other case they were vigorous and able to do their work. In each case a new drainage-tube and new suction-syringe was used, after having been thoroughly sterilized before the operation. Iodoform gauze dressing was used in each case. The adhesions were not more severe in one case than in the other. The after-drainage from the peritoneal cavity was as free in the one case as in the other, and yet the one patient died from rapidly-spreading purulent peritonitis, and the other recovered.

When we ask ourselves the question, What constitutes the difference in these cases? Why does one die and the other recover? we must conclude that the difference is due to some peculiar condition of the patient. If it were not for this peculiar condition, every case of septic peritonitis would die. In the days when operations were not performed for the relief of patients suffering from acute general peritonitis, a large percentage of the patients died, but a few of them recovered. Those that recovered frequently did so without any pus-formation, or, at any rate, without any external evidence of pus-formation. Outside influences in these cases can, therefore, be left out of the consideration of the different results, because no operation was performed in either the fatal or non-fatal cases.

Since we have been operating on these cases, we must all have been astonished at the differences to be observed on the operating-table. In some cases the visceral and parietal peritoneum appears to have become rapidly thickened, as if from a large influx of leucocytes,—a defending army guarding the system from the invasion of the poisonous foe. In

the most rapidly fatal cases that I have seen, this thickening was entirely absent, and portions of the intestines looked so gangrenous that I was afraid they would rupture during the necessary manipulations. In the cases in which operation has been deferred, and in which pus has been present in the peritoneal cavity in contact with the intestine for two or three weeks, this thickening is particularly well marked.

I remember well the case of a little girl who had a rupture of a suppurating mesenteric gland three weeks before I saw her. She had been ill with peritonitis during the interval, and the abdomen was enormously distended with pus and gas. After puncture with a knife, the pus and gas were forced out like soda-water, under pressure, from a siphon. The lymph-follicles, or whatever these little elevations may be, were found studded over the peritoneal surface like the little elevated spots to be seen on the rind of the cucumber. In this child the system had been protected from this enormous quantity of pus, free in the peritoneal cavity, for three weeks, and the post-mortem examination showed that she would have recovered after the operation had it not been that the small intestine had become gangrenous in one spot near where the suppurating gland in the mesentery burst, and all milk ingested passed out through the drainage-tube in the *cul-de-sac* of Douglas. She lived for two weeks, and died of starvation. The intestines were subsequently found firmly agglutinated into a solid mass, the peritoneal cavity was almost obliterated, and the omentum could scarcely be recognized.

Two medical students may enter the dissecting-room together, each may cut his finger on the same subject in a similar manner, the one may become suddenly infected and lose his life from acute septicæmia; the other may observe nothing but a little reddening around the incision and the point of inoculation. There must be a protecting influence in the one case that is not present in the other. We are well aware that some people are liable to inflame after a scratch or a bruise, while others may have scratches and bruises that will heal without the slightest trouble. We are well aware that the same person may, at certain periods of ill health, be liable to inflame after a bruise or cut, while during periods of good health he will heal readily. Children with a tubercular or syphilitic taint are prone to periosteal and bone inflammation and joint-diseases, after slight injury, whereas, a healthy boy can be knocked and battered about without any ill consequences resulting. There is no open wound in these cases through which germs can be introduced, and hence the difference must be due to some inherent individual influence.

The cases that are most frequently fatal after the performance of an abdominal operation are those in which the septic element is prominent, and has been prominent for some time previous to operation. I fear such cases, and sometimes think that it is almost useless to operate upon them. If the pus-tubes be small and the septic infection be great the patient is very liable to die; and pus-tubes ten times the size, with extravasation of the pus into the abdominal cavity at the time of the

operation, may be removed with much greater safety from a patient whose circulation has been, to a great extent, shut off or freed from the septic elements.

The presence of the tendency to bleed may seriously affect the result of an abdominal operation. This is a tendency undoubtedly inherent in the patient, and perhaps transmitted from parent to offspring. I operated on one such, and enucleated two degenerated ovaries and diseased tubes. Before operation the information that she came of a family of bleeders was withheld from me, and it was only at a subsequent date that I learned that both her mother and her sister had bled to death. The bleeding continued after the separation of the adhesions in the form of an oozing, and this oozing kept up through the drainage-tube for nearly a week, in spite of the use of a solution of perchloride of iron injected about the third day through the drainage-tube. I concluded that she must die and told her friends so. On several occasions she seemed to be approaching her end, but rallied again, and finally recovered.

Organic disease in other viscera may seriously affect the result of an abdominal operation. I have performed total hysterectomy for a large fibroid in a girl suffering from both aortic and mitral valve-disease. The pulse remained irregular and quickened for forty-eight hours, and this was accompanied by great shortness of breath. After three days the patient progressed in the ordinary way, and made a good recovery. I have operated on several patients suffering from renal trouble, and always fear these operations more than I do those performed on patients suffering from

heart disease. If the renal disease is sufficient to produce an œdema of the tissues the wound does not heal as kindly as it otherwise would do. The pulse seems to become more rapid and remain higher for a longer period. In one case I noticed a peculiar wandering of the mind without any rise of temperature that passed off after two or three weeks' time. There was albumen in the urine, but no casts were discovered. Whether the wandering of the mind had any connection with the presence of albumen or not I am unable to say. The pulse remained at about 110 to 115 during this period.

The mental condition of the patient may affect the result of an abdominal operation. In one of my recent cases, I called to see the patient the night before the operation. I had seen her but once and was now amazed at her appearance. I made the remark to the nurse that she looked blue with fear, as if she were terribly frightened at the prospects of the operation next morning. She was given a sedative, and on the morning of the operation appeared much calmer. A simple ovarian tumor was removed, and during the night of the day on which the operation was performed she became wild and almost uncontrollable. The temperature remained normal and the pulse was but slightly elevated. Under the influence of bromide of potassium we were able to control her for several days, but she appeared abnormally nervous. The wound healed by first intention; the stitches were taken out; there was no pus to be seen anywhere, the abdomen was flat; pulse from 60 to 80 until the eleventh day. On the tenth day the temperature for the first time became

elevated. The patient became wildly maniacal and required restraint. The mania gradually deepened in three days into a coma; the coma continued, accompanied by occasional spells of Cheyne-Stokes respiration for a period of four days, and death took place on the eighteenth day after operation. I learned that her brother was burned some years ago, and that when the burn had healed he became maniacal and died insane.

Nowadays the craze is to call everything that is not understood "septic." This case of mania would be put down as a case of septic mania; but I never saw an abdomen look better or a wound heal with greater readiness. I have also had two patients die from mania following hysterectomy, one on the twelfth day and the other on the eighteenth day. I have always considered these cases of mania following hysterectomy as ones of septic origin.

Second.—The influences closely connected with the character of the operation.

My operative work is done in three different hospitals and in private houses. I always carry a large satchel containing instruments and sponges prepared under my own supervision. No sponge, drainage-tube, suction-syringe, silk, or rubber dam is ever used a second time. Thus the influences surrounding an operation, as far as the instruments, sponges, and operator are concerned, are the same in each case. A simple ovariectomy done in one place can thus be compared with a simple ovariectomy done in another. The influence of the character of the operation on the result is so great that statistics of ab-

dominal operations should be classified somewhat as follows:

Pyosalpinx:	<div> <div>With rupture of the tube and escape of pus into the abdomen.</div> <div>Without rupture of the tube or escape of pus into abdomen.</div> </div>
Ovarian cyst:	<div> <div>Simple.</div> <div>Suppurating.</div> <div>Strangulated.</div> <div>Broad ligament cysts requiring enucleation.</div> </div>
Hysterectomy and Myomectomy:	<div> <div>Total extirpation.</div> <div>Extra-peritoneal with clamp.</div> <div>Ventral fixation.</div> </div>
Hysterectomy:	<div> <div>For suppurating fibroids.</div> <div>For fibroids in broad ligament.</div> <div>For fibroids accompanied by peritonitis with rupture of tube.</div> </div>
Oöphorectomy:	<div> <div>For fibroids.</div> <div>For dysmenorrhœa.</div> <div>For abscess of the ovary with escape of pus into the abdomen.</div> <div>For abscess of the ovary without escape of pus into the abdomen.</div> </div>
Peritonitis:	<div> <div>Puerperal.</div> <div>Gonorrhœal.</div> <div>Tubercular.</div> <div>Appendiceal.</div> <div>From ruptured pus-sac.</div> </div>
Appendicitis:	<div> <div>Without peritonitis (re-lapsing).</div> <div>Without pus formation.</div> <div>With pus formation.</div> </div>

Were such a classification closely followed we would be able to learn more regarding the danger of infection of the peritoneum from within. This danger is undoubtedly a very great one. I believe that one might open the abdomens of one hundred

people in a healthy condition, yes, perhaps of five hundred people with proper precautions such as those now generally adopted, without having a single fatal result. The removal of simple ovarian tumors when the patient is in a good condition of health should be attended with almost no mortality. But when we come to speak of operations for suppurating ovarian cysts, for suppurating Fallopian tubes, for suppurating fibroid tumors, we then have a septic element to deal with and the mortality must be, as a consequence, enormously increased, in spite of all the washing out of the peritoneum, all the packing with iodoform gauze, all the drainage that can be instituted, and all the antiseptics that have ever been brought into use.

We often hear the relative merits of the drainage-tube and the suction-syringe discussed. Some of these discussions are carried on by those who theorize but who do not bring personal experience to bear. I operate on all cases in which I think the patients have any chance of recovery. On three occasions operations have been done on patients when professional brethren standing by have stated that, in their opinion, there was not the slightest chance of recovery. One of these had a pulse of 160, and acute general peritonitis from the rupture of a pus-tube. Operation was sanctioned by my *confrères* though they felt the case was hopeless. The second was one of perforation of the intestine and escape of the last meal into the abdominal cavity with collapse and acute general peritonitis. The perforation could not be found, and yet the simple washing out of the food from the

peritoneal cavity saved the patient's life. After several months a second perforation took place in the jejunum, I presume at the old spot, and he entered the hospital, but died almost as soon as he arrived. The third case was one of rupture of a pus-sac into the peritoneum with the patient apparently beyond the hope of recovery at the time of operation. She also made an excellent recovery. Let us put these cases on the one side of the balance and on the other a large number of cases of purulent peritonitis that fail to recover in spite of operation, cases in which multiple abscesses have been drained, pus-pockets thoroughly cleansed, and still all without avail. Unfortunately we find in the literature on this subject, that has been collected within the last few years, cases recorded in well-rounded sentences that give the novice the idea that all he has to do in a given case of purulent peritonitis is to open the abdomen and to wash it out, and that the patient will be up and running around in three or four weeks.

The mortality of cases of purulent general peritonitis is enormous either with or without operation. Without operation about one hundred per cent. will die; with operation a few may be saved. Professional men are not always fair in their criticisms of their professional brethren. The man who operates on cases of purulent peritonitis; endeavoring to do his duty and to give the patient one last chance, will necessarily have a much higher death-rate than the surgeon who, with a knowing smile, withholds his hand and operates on no case that is not likely to recover. Thus, a contrast of his work with

that of his neighbor may redound to his credit. He is careful to publish a list of his successful operations so that those who are not in the "inner ring" may be able to judge of his wonderful ability.

Each time that a surgeon uses a knife and the patient dies, people say that the patient died as the result of the surgical operation, and this does the surgeon harm. Take for instance, a case of appendicitis with disease in the neighborhood of the appendix, secondary rupture of the abscess-sac into the abdominal cavity, a purulent peritonitis, and the patient in a septic condition. In such a case, in spite of all the antiseptic precautions we can take, in spite of the fact that the patient may be surrounded by the best of surroundings and be attended by the best of nurses, he will die whether we leave him alone or whether we operate on him. Without operation there is no hope of recovery, and with operation the hope of recovery is remote.

Third.—The influences due to the atmosphere and surroundings of the place in which the operation is done.

For a time the germs in the air received a large amount of attention and the carbolic spray was used. The carbolic spray was an acknowledgment of the presence of foulness in the atmosphere and was used to neutralize this condition just as the ignorant may imagine that by dipping septic hands into a solution of carbolic acid or bichloride of mercury they are destroying the filth that is present without first attempting to eliminate the filth by some other method, and without reasoning that if the filth is eliminated no antiseptic is required.

Of course, if soap eliminates filth and destroys the germs it is an antiseptic.

After the spray in the atmosphere came the other extreme of relying too much on antiseptic washes for the hands and for the patient. There can be no doubt that thorough cleanliness is essential, but the man who performs abdominal operations and relies implicitly on antiseptic dressings to the wound, and antiseptic lotions to the hands and neglects the condition of the atmosphere in which the peritoneal cavity is opened, will fail to secure as good results as he could obtain if more attention was paid to this important factor.

In my opinion we have been taught to pin too much faith to antiseptics. Not that we should cease using them but that we should learn to look further and pay greater attention to other matters than we do. To endeavor to eliminate the influences of atmospheric contamination of which I speak, it is necessary that one should conduct his operations or experiments, if you like to call them such, with every antiseptic and aseptic precaution. I have found that when the peritoneum has been opened in a contaminated atmosphere and closed again, the antiseptics prevent wound-contamination and assist the wound to heal kindly, but the poison introduced into the peritoneum at the time of the operation is sufficient to produce irritation with a little more distention than one cares to see, with a little higher temperature and pulse than one cares to see, and, though the patient recovers, the progress of recovery is not as free from incident as it ought to be. When such peritoneal irritation is found in two or three simple cases performed in the

same operating-room one must conclude that if every precaution is taken, on the part of the nurse, and the patients are apparently in equally good health, the difference in the result must depend upon the state of the atmosphere of the operating-room at the time of operation. If the plumbing be good and the other patients undergoing treatment for minor troubles are in good health, the different results produced by the atmosphere must be due to some other poison than that of sewer-gas. What these poisons are it is difficult to say. I am satisfied, however, from my own observations that the entrance of a septic case into a building in which abdominal operations are being done on the same floor or the floor above, have an influence for evil on the results. All septic cases, such as neglected cases of appendicitis with burrowing abscesses, cases of neglected and septicallly infected lumbar abscess, cases of infection following labor and miscarriage, all emit a peculiar odor, and while the nostril is able to detect the odor, a wound opened in the neighborhood is able to detect a poison. The simple removal of such a patient from the institution by death or otherwise is not sufficient to prevent the subsequent infection of wounds. I am speaking now of institutions in which no nurse attending to a laparotomy is allowed to go near such a septic pus case, as any of those mentioned above, so that this contamination spoken of cannot be carried by the hands or the clothing of the nurse, but must be carried by the currents of air. We must admit that while the nurses are trained to take every precaution the results under one nurse will not be as good

as they will be under another. But omissions on the nurse's part can be, to a great extent, detected.

Whenever a case dies after the removal of a simple ovarian tumor, or the performance of some simple operation on the abdomen, operations in which there can be no infection from within owing to the nature of the disease for which the operation is performed, whenever such a patient dies from peritonitis, I consider that it is of the greatest importance to criticise carefully the surroundings of the patient at the time of the operation. We must exclude the possible infection from fingers and sponges, because I am supposing that the operators are ones who take every precaution both as to their own clothing, as to their instruments and sponges, and their avoidance of infectious diseases. It seems to me that the peritoneum that has been inflamed has become accustomed to the process of phagocytosis, and is not as liable to be poisoned from either external or internal influences, as the peritoneum that has never been inflamed, and from which perhaps we are endeavoring to remove, say, a simple ovarian tumor. To this fact I attribute our success in many operations for the removal of pus-tubes in which an enormous surface is bared, in which pus bathes this bared surface without leading to any septic infection. I believe a healthy peritoneum is more susceptible to a slight poison in the air than an unhealthy peritoneum.

It would be well if we could compare the results of abdominal operations in different cities during an epidemic of cholera or la grippe, measles or small-pox, or even during an epidemic of typhoid fever due to the impure quality of the water gen-

erally consumed. Patients debilitated from a recent attack of influenza or la grippe are certainly not in as good a condition for a successful abdominal operation as those patients who have not had such an attack. The infection from cases of influenza spreading itself mysteriously in the air through the medium of the breath must be very potent. The operator who has just passed through an attack of measles will scarcely dream of doing an abdominal operation until satisfied that he is thoroughly rid of the infectious poison, but many operators undoubtedly continue to operate while suffering from contagious influenza. The question may be asked, Does this affect their results?

The other day I had just completed a hysterectomy, and, after leaving the hospital, met a gentleman who, three days before, was confined to bed with la grippe. He said he was sorry that he had not heard of the operation or he would have been present. I told him I was very glad that he had not heard of it, because I would as soon have asked a person recovering from scarlet fever or measles as to have asked him to be present.

Then again, it would be well if we could compare the results of abdominal operations during the period at which sickness among the population is rife, a period at which, in our northern climate, vegetable matter is decomposing and foul vapors are kept in by clouds and fog.

I have thought that the cases operated on in isolated houses among the middle class, when the children have been sent away and the house has been thoroughly put in order before the operation, and when a trained nurse has been employed, have done

better than any others. Each house thus becomes a little private hospital with one bed.

On windy days, we often see the dust, composed of horse-manure and filth, swept along in clouds; and with certain kinds of pavement the house-keepers complain that they are unable to live with the windows open. Whether such dust can be dealt with by a healthy peritoneum or not it is difficult to decide, but one would not think it wise to dust dry horse-manure over a healthy peritoneum.

Some months ago, in a surgical ward of our general hospital, a child admitted with a broken leg became affected with scarlet fever. For some time subsequent to this the wounds in the ward did badly; no erysipelas presented itself, as it would have done in the pre-antiseptic and aseptic days and days when such a thing as ventilation was scarcely thought of. As a consequence of this outbreak, it was necessary to clear out the ward, to fumigate it with live steam and sulphur, repaint and rewhitewash it. Since that time the wounds have shown no abnormal amount of irritation. I had a run of cases in which all did well; among them were a number of bad pus-tube operations and a Porro's operation. These were done in the open theatre as a matter of necessity, owing to repairs to the pavilion, and each case was put in an isolated ward, especially prepared, if a drainage-tube was left in. We then moved back into the pavilion, and my cases and those of my *confrères* did well. After a time a patient was admitted to this pavilion suffering with an encysted peritoneal abscess following labor. She was placed in the ward down-stairs, very unwisely, to await

an abdominal operation. Her condition was so desperate that we felt it would be a hardship to remove her, but, in order to take all precautions possible, opened the abscess in a small room adjoining the ward, and not in the ordinary operating theatre. The operating theatre is removed from both wards, and all cases after abdominal operations are put on the floor above. The abscess was opened with antiseptic precautions, and was washed out. Patient was very septic. In the next few cases operated on after this time, the wounds looked abnormally red, and showed evidence of some septic infection. This happened not only with my own cases, but with those of my *confrères*. The patients were now all turned out of the lower ward, and it was thoroughly aired but not fumigated. This did not seem to be sufficient, and we therefore moved all the patients out, had all the ventilating shafts cleaned of dust, floors rewaxed, walls rewhitewashed, and the bedding fumigated and disinfected. Since that time we have had no trouble; the wounds have been healing without the slightest sign of irritation. I am speaking, of course, of simple cases likely to be infected from without at the time of the operation.

I was subsequently appointed to do the abdominal work in a hospital established in an old building, a hospital intended to admit all classes of cases, including typhoid fever, erysipelas, and cases of suppuration. I determined to perform a few operations, and if the results were not satisfactory, to perform no more until a proper isolation surgical ward could be provided. The following cases were done, with the results given:

	Cases.	Recovery.	Deaths.
Pyosalpinx	4	1	3
Ovarian cyst, simple . . .	1	1	0
Appendicitis	2	2	0
Peritonitis, acute, general	1	1	0
Exploratory incision for malignant disease of the mesentery	1	1	0
Exploratory incision for papilloma of both ovaries with ascites	1	0	1

The first operation performed was successful though extremely difficult. From the beginning, however, the wound did not suit me. The operation was done on the top story in the operating-room, after fumigation over night, and the adoption of all antiseptic precautions. With a different assistant I then performed two operations in one morning, one an exploratory operation for cancer of the ovaries, and one exploratory operation for cancer of the mesentery. The peritoneum was not washed out in the former case after the removal of the ascitic fluid, and the patient died of purulent peritonitis. The other case recovered, but did not make as ready a recovery as I would have liked. With a different assistant I then did two more operations in the same operating-room, with the same precautions. The first was a case of cyst of the ovary, and she made a good though not as easy a recovery as I generally see in such simple cases. The second operation was done for the removal of two pus-tubes, and was very difficult to perform. The abdominal cavity was washed out and drained; the patient died after several weeks from intraperitoneal suppuration. The abdomen was reopened, and a large collection of pus found in the *cul-de-sac* of Douglas and washed out, but sepsis seemed to have been too great for

the patient. At the post-mortem examination another collection of pus was found farther up in the abdomen. I then decided to do no more operations in the room upstairs, and was given a private ward on the first floor. Here I operated on a case of acute peritonitis; the patient recovered, but the wound looked angry from the first. The next case was one of double pus-tube done in the same room with every antiseptic precaution. The assistants had a bath on the morning of the operation, and the room was thoroughly fumigated; all the water used had been boiled; the instruments and sponges as usual were my own; the abdomen was thoroughly disinfected before the operation, and ward-tenders were not allowed to enter the room. The case was septic from the first, though, of course, pus flooded the abdomen at the operation, and she died of septic peritonitis. The next case was one of appendicitis opened in the operating-room upstairs: he recovered. The next was one of double acute gonorrhœal salpingitis, the tube-ends were disturbed from their adhesions, and, no doubt, their contents were emptied into the abdomen; the abdominal cavity was washed out and drained. Patient became distended before night, and died from acute peritonitis inside of forty-eight hours.

These cases were severe, but their course did not correspond to cases equally as severe done in two other hospitals, with special arrangements for the performance of abdominal operations. In ten cases we thus had four deaths. In one of the other hospitals I had operated on, within a short period, nineteen cases of pus-tubes with seventeen recoveries and two

deaths; in the other hospital, on ten cases of pus-tubes with seven recoveries and three deaths, making in all twenty-nine cases of pus-tubes with five deaths, or a mortality of 17 per cent. These were all severe cases, and not cases of removal of adherent ovaries and tubes. In the other institution I operated on four cases of pus-tubes, with three deaths, or a mortality of 75 per cent. I therefore decided to do no more abdominal operations there until our new surgical wing is completed. The nursing of the patients was excellent, and every assistance was given me to make the work a success.

I consider the poison in recent cases of gonorrhœal peritonitis as particularly severe. In the past year I have been twice poisoned during operations on such cases. In one case a scratch from a frayed cuff on the wrist proved sufficient to allow a vaccination, with the rapid formation of a pustule; the nurse who handled the sponges had two small scratches on two of her fingers, and each of these scratches rapidly became the seat of a pustule. These pustules resembled those frequently found around the lips after a severe rigor. In the other case a small abraded spot on the little finger was the seat of infection, and the nail was lost as a consequence.

Fourth.—The influences brought to bear upon the patient by the details of the after-treatment.

It is not my intention to go deeply into this division of the subject, but to state a few bare facts. There are certain conclusions to which I have come from personal observation. A drainage-tube should be used after separation of many adhesions, and after washing out the abdomen for the

removal of peritoneal fluid or septic material. When used for purposes of detecting hæmorrhage it should be removed in a few hours; when used after washing out peritoneal fluid or septic material it should be used for a few days, and when removed a rubber drainage-tube should be passed through its centre, and left *in situ* for a few days longer, so that any subsequent collection of pus may readily find a track through which to burrow to the surface. These collections of pus will occasionally occur around the stump of septic pus-tubes, and, as a consequence of isolated septic material, that may become lodged between coils of intestine.

When hysterectomy is performed by the extraperitoneal method, and there have been many adhesions to contend with, a drainage-tube should be used for a few hours above the stump. When hysterectomy is performed by the abdomino-vaginal method a drainage-tube should be passed into the *cul-de-sac* of Douglas from the front, even though the vagina be packed with iodoform gauze. The tissue around the cervix has a tendency to ooze, and enough blood may lodge in the *cul-de-sac* of Douglas to set up a fatal peritonitis.

The less we interfere with the inside of the gall-bladder after operation the better. The gall bladder seems prone to bleed after much handling of its mucous membrane. I have learned to believe less in the efficacy of purgatives for the relief of peritonitis following abdominal operations; they are not of the great value many authors would have us believe. One would think after reading the literature of the subject that every case that can be purged will recover. Re-

covery may occur after peritonitis if no purgative is given, and, in such cases, there is usually a diarrhœa produced by the peritoneal poison. When the bowels cannot be moved by purgatives, and when this diarrhœa does not occur, the patients will die. In the bad cases purgatives may be given by the painful without producing any result, except that of causing discomfort to the patient by increasing the vomiting.

When the temperature goes down and the pulse goes up, and the patient looks dark under the eyes, languid and tired, and is vomiting dark-brown fluid, and the abdomen is distended, it is useless to push purgatives or enemata; the patient will die in spite of all we can do.

I have determined to use the so-called capillary drainage, produced by packing the glass drainage-tube with iodoform gauze, no longer. In a recent case, though the upper part of the gauze was wet through, no blood appeared externally; the gauze was not packed tighter than usual. I felt satisfied that there must be more blood oozing from adhesions, and took out the gauze so that the sucker could be used, when an ounce and a half of pure blood was removed. This gauze drainage I consider a dangerous innovation. If the drainage-tube is left to detect hæmorrhage, its usefulness is lost when packed with gauze. To check such hæmorrhage it is necessary to keep the pelvis dry, and this can only be accomplished by means of the suction-syringe. We have heard of late that quantities of blood-clot may be left in the abdomen and pelvis and may do no harm. One might admit this to be so in some cases, but it can scarcely apply to

cases of pus-tubes with rupture of a pus-sac at the time of the operation; such blood, if left behind, must readily become infected. Its removal is the only safe course of procedure. It is better never to use a drainage-tube than to remove it too soon. I have saved two cases by taking out two lower stitches and reopening the wound. In the one case I replaced the drainage-tube in the *cul-de-sac* of Douglas, and in the other did not; the septic fluid escaped, and each patient made a somewhat tedious recovery.

And now, in concluding these roughly-constructed sentences, a few facts come prominently before me. In enucleating pus-tubes, the "tactus eruditus" will save many a life. Boldness with care are essentials, if a surgeon hopes to meet with success in such cases. It is better not to operate at all than to do an incomplete operation for the removal of pus-tubes or suppurating ovaries. Even though a surgeon may have witnessed hysterectomies performed many times by others, he will add to his own skill something of value after each hysterectomy he performs himself. I feel more at home now with these cases than I did at first. We have a tendency to be too much afraid of hæmorrhage in these cases, and, as a consequence, are apt to be in too great a hurry to apply a rope, rubber, or wire clamp. A pair of fingers, or a pair of ordinary forceps, used with coolness, will often enable us to avoid ureters, intestine, and bladder when applying the clamp.

With experience we learn when to stop. In one of my early cases I met with an encephaloid tumor growing from behind the uterus. During the

manipulation, being friable, it was torn. The hæmorrhage was so great that I thought it would be impossible to stop it by sponge-pressure, and therefore removed the growth, and the patient died in three days. Among my later cases I met with an exactly similar condition in a woman considerably older; the same bleeding occurred from the tearing of the friable tumor, but sponge-pressure was used for a considerable time, nearly half an hour, and during this period the sutures were placed, and, to my amazement, the surface became clotted over, and the hæmorrhage, even from the large veins, ceased. The patient made a good recovery from the operation, but died from the progress of the disease a month or six weeks later.

I learned from another case that, although iodoform gauze may be passed through the opening in the vaginal vault after abdomino-vaginal hysterectomy, the drainage of the *cul-de-sac* of Douglas may even then be imperfect, and pus may collect in the *cul-de-sac* and cause a fatal termination to the case. I have also come to the conclusion that peritoneal fluid is very apt to become infected, and that when peritoneal fluid is present in any quantity at the time of operation, as it is in cases of papilloma of the ovaries and tubercular peritonitis, it is better to wash out and drain the cavity than to draw off the fluid and close the cavity; the water thus takes the place of the peritoneal fluid, and, owing to its chemical composition, is not as apt to become infected. The large quantity of albumen found in the peritoneal fluid in these cases must make it an admirable culture medium.

The Tat Shang Pin, or Midwifery Made Easy.¹

BY JOHN G. KERR, M.D.,
CANTON, CHINA.

THE "Tat Shang Pin" is a popular work on midwifery, in common use among the people, and the standard authority in all difficult cases. My attention was called to it many years ago,² when I had occasion to perform the operation of embryotomy for the wife of a literary man, and I found that he had been examining this work, to resolve the difficulties of a case of face presentation with the chin in the hollow of the sacrum.

The book is held in such esteem that it is gratuitously distributed by men of wealth for the sake of gaining merit from the good thus done.

I have endeavored to give a literal translation so as to exhibit, not only the popular mode of treating such subjects, but to give the writer's ideas in his own style, with all his sophistry and inconsistencies.

I have not been able to learn what is the author's name, or when it was first published. It is, no doubt, several centuries old.

The medical literature of the Chinese is contained in many thousands of volumes, and I hope that this attempt to place a specimen before the profession may not be without interest to many. I hope also that it will excite a benevolent sympathy in behalf of the multitudes of our fellow-beings who are helpless in the hands of ignorant and superstitious friends at a period the most trying in a woman's life.

MIDWIFERY MADE EASY.

Childbirth is not a calamity, but difficult labor is the misfortune of women; that this misfortune is of frequent occurrence is to be referred to the will of heaven. Does heaven err? It is sufficient for men to attend to their own duty.

This book is published with reference to difficult labor only, for my feeble abilities are confined to this one subject, and I undertake it with honest views.

All who study with diligence the directions of this book, and carefully follow them, will be sure to have easy labor, and thus the sufferings of women will be ended. This is in harmony with heaven's benevolent will. For one to possess such knowledge and not speak of it is wrong. To hear and not promulgate it is also wrong. Those who desire to save life must, as soon as they see this book, disseminate it everywhere. The rich must have the book printed and published gratuitously, and the poor must with their own hands write several copies to give away, each one doing according to his ability. This thing is the special duty of us who engage in literary pursuits. We cherish a spirit of benevolence and charity not from any selfish purpose, but if we treasure up a superabundance of good works, it is in accordance with heaven's benevolent will that we should enjoy prosperity and happiness. The doctrines of this book have been tested by the strongest proof, so that their correctness does not admit of doubt, and whoever publishes or copies it must neither change nor make additions to it, for by so doing he would be the cause of great damage.

From the time of the "Happy Delivery" (A. D. 600), excellent works on

¹ Translated from the Chinese by John G. Kerr, M.D., Canton, China. Presented to the Obstetrical Society of Philadelphia, February, 1893.

² In 1860.

this subject have been published in each successive generation. In these books the doctrines taught with reference to strengthening the womb, managing the delivery, and the after-treatment, are perfect and without the least omission. It may be asked, why should I multiply words? I answer, that some of these have only selected good prescriptions, but have not explained the principles of midwifery, and others who have attempted are very imperfect, so that only those who have studied with diligence for a long time are able to use them. It is impossible to derive benefit from these books on occasions when disorder and confusion arise. I therefore have undertaken to make known in the simplest terms the evident designs of heaven's benevolence, and I have not shunned labor, or avoided frequent repetition, in order to make everything plain, so that preparation may be made beforehand, and everything had in readiness when the occasion arrives. Hereafter, in all future time, both mother and children may attain to old age. Will not this be glorious?

It will be my purpose to adhere strictly to the doctrines of the ancients, explaining them one by one in order. How dare I set forth wonderful inventions?

In discoursing on the doctrines of midwifery there will be found many repetitions, but recipes have been altogether excluded, except a few taken from the ancient sages which are most common and most successful, because in treating common diseases the most common medicines are to be used. I have rejected the whole list of wonderful and infallible panaceas, because if a patient has self-control

and is able to help herself, even common medicines are not required. But if medicines must be taken, the recipes are to be found in other books, and there will thus be no contradictions.

All the rules for the treatment during pregnancy, for the management of labor, and for the after-treatment, are plainly laid down, even with frequent repetition, because this business is a common every-day concern of women, and if there is a single omission, sickness may be the result. Is it not better to be on your guard while in health, than to take medicine after disease has come?

The style of this book is colloquial, and will not escape the ridicule of scholars because it was originally published for the benefit of women. Those who can read need not be told, but those who cannot read must be instructed, so that all may be made to understand thoroughly. During the period of pregnancy the book must be clearly explained, so that when the time arrives, the patient may have self-control. Not only must those about to become mothers become familiar with it, but every one, old and young, male and female, must be made to understand the doctrines it teaches. To witness theatricals and hear the relation of stories has no advantage compared with all.

Although it is important that all be acquainted with this book, it should be made familiar especially in the families of the rich, because the females are brought up delicately and they indulge to excess in dainties and rich living; they also live in idleness and their constitutions are weak. Moreover, they are proud and will not listen to reason. As soon as labor be-

gins and the pains are felt, they have no courage to bear it. Then in lighting and kindling fires, the ladies calling, and servants answering, all in confusion both in the room and outside. The midwives too are running back and forth, making themselves very officious. Without waiting for the pulse to leave the viscera and before the womb is turned, the patient is hastily placed over the tub and the delivery cannot be accomplished. Then wonderful panaceas and costly medicines are given at random, to the great injury of both mother and child. Alas, is it not deplorable? But if this book had been carefully studied, good luck and happiness would have been the result.

Since the works on midwifery are very numerous this little volume is purposely limited to the more difficult parts. On the subjects of pregnancy and the after-treatment, only two or three points are mentioned, but for the most part they are omitted. It is a mistake to suppose that this book covers the whole ground.

It may be asked, why is the section on labor placed in the beginning of the book? It is because that at the time of birth there is much confusion, and deliberate study is impossible; therefore the most important parts are placed first, so that it will be like opening a door to see a mountain; those who fix the whole mind on it can make no mistake. Under ordinary circumstances it will be well to begin at the section on Strengthening the Womb, and study the subjects in their proper order.

The section on false pains is very important, for if one is able to distinguish false pains, he also understands true labor. The sections on

false pains and labor are like the inside and outside of anything (equally important), and must be carefully studied. I have selected a few examples from the ancient sages as corroborative evidence that the doctrines here taught are altogether correct. By tasting a mouthful one knows the quality of the whole dish.

The proverb says, "do not neglect to do a good deed because it is little." Although this book is exceedingly small, nevertheless it treats of the subject of childbirth, which always and everywhere is the beginning of the life of man. Moreover, what I have done, my eyes have seen, and my ears have heard, I have in every instance found correct; therefore, forgetting my own feeble abilities, I have published this book, and it will not be strange if it is deficient in many respects, but it will be well if my generation appreciate my purpose.

SECTION I.—BIRTH: ITS ORIGINAL NATURE.

(1) The most benevolent gift of heaven and earth is birth. It is universal; and the most important is the birth of man. It is called so because it is the beginning of man's life. It is the spontaneous regulation of heaven and earth, just as the eyes see, the ears hear, the hands grasp things, or the feet walk. It is perfectly common and easy, and requires no forcing. But in these days it is said that childbirth is difficult, and perhaps it is because mothers have sinned against heaven. Does heaven kill in giving birth? Certainly not. Consider that man is the most spiritual of all things. The production of other things is not difficult. When the time comes for buds to spring forth,

and for the eggs of ducks and chickens to hatch, are men required to force them out? It is self-evident that they are not. It is mankind alone that are not so. If a child gets a bone in its throat, and a hundred remedies have failed, the whole family are in distress; then an old woman says, "This is not strange," and directs the child to lie quietly down and drink rice-water. After three days the bone comes out spontaneously. Thus the principle is easily understood. The bone in the throat is man's affair, but heaven is superior to man. Therefore it is clear that heaven's decrees with reference to the common affairs of men are perfectly spontaneous. If a thing was originally easy and one considers it difficult, or if it was originally common and one considers it strange, this is not surprising. By carefully following the principles here laid down, there will be no mistake in a hundred trials, and there will be very little occasion to administer medicine.

(2) If it were necessary to talk until my lips were blistered and my tongue dry, I would be thankful if I could thus make my book command the confidence of all. Of late years the difficult births in the city where I reside have been few, but alas, my doctrines have not been disseminated everywhere. As there is nothing else in which I can be so useful I am constantly engaged in teaching these doctrines and in preparing and publishing my book. My only desire is that all may be recipients of heaven's care in childbirth, and be protected from injury by meddlesome interference.

SECTION 2.—DELIVERY.

(1) There are three important points for the patient to attend to.

(a) She must sleep.

(b) She must bear the pains with fortitude.

(c) She must not try to hasten the birth.

(2) When pain is first felt, the patient must exercise fortitude, and remember that this is both necessary and natural, and that there is no occasion for fear. It may be known that the full time has come, if the pains come on at intervals, and gradually become more severe.

(3) When the pains are slow, it may be known that they are false pains, and the patient is to lie down and keep quiet and take some nourishment. These directions are important, and not to be neglected. It is a grave error to mistake false pains for a true birth.

(4) Whether the pains be true or false, it is important to bear them. Rest and food must be taken as usual. Delivery is easy when the pains are ripe. Whether the pains be true or false, they may continue a long time, and a clear distinction can be made by observing their rapidity and severity. It is very important not to hasten the birth by twisting the back, or rubbing the stomach. When standing, the patient must be erect, and when sitting must sit upright, not turning the body to the right or left. In these things the patient must exercise self-control. Another cannot do it for her. The business concerns her own life, and not another's.

(5) It is important to nourish the spirits and husband the strength, and this can best be done by rest and sleep, but if the patient cannot sleep, let her walk a few steps assisted by some one, or stand up leaning on a

chair or table. If the pains are not strong, she must lie down and sleep, for this is indispensable. She must lie on her back, so as to allow the abdomen to be relaxed, and this will favor the turning of the child, for when the mother lies down, the child is also recumbent, and in turning it does not then waste its strength. It is exceedingly important for both mother and child to reserve their strength for the hour of delivery, for then it will be needed.

(6) Whether the delivery be quick or slow, the patient must not carelessly hasten the birth by bearing down, neither is she to listen to the midwife saying, "Ha! the head is nearly born," for it is a great mistake to try to hasten the delivery. It is the decree of heaven, that when the full time has come the child will of itself turn and come out. Why then so much disorder?

(7) There are cases where the child is not strong, and on coming to the outlet cannot be born. Then the mother must gently bear down to assist it, and it will be separated, just as a melon when it is ripe falls from the vine.

(8) When the blood and spirits separate, and the joints of the whole body are loosed, it is just like water running down hill, there is no need of forcing it. So when the birth is accomplished, the mother cannot understand how it is.

(9) Some may say that if in evacuating the bowel exertion must be made, how is it that in childbirth bearing down must be avoided? Such a one does not consider that the fæces are inanimate, and must be expelled by force, while the child is a living thing, possessing power to turn itself, and

you must wait until it comes out voluntarily. The patient must not only not exert her strength, but she must fear to do so, because the child sits upright in the womb, and, when the time of birth arrives, it turns about with the head downward. The womb is so narrow that it is difficult for others to assist the child, and it is best to let it turn around gradually, then it comes out as if suspended by the heels.

(10) If the mother exerts her strength before the child has turned around, then it will be born feet foremost, which is unnatural, and is called "being born with *the feet on the water-lily*." If the mother bears down when the child is half turned, then it is crosswise in the womb, and the arm comes out first. This is called a "*feeling-for-salt*" birth. Sometimes, when turning is partly accomplished, one side of the head, or one of the shoulders, presents, and the birth cannot be accomplished. This may either be because the full time has not arrived or because the birth has been forced. I therefore earnestly exhort patients not to use their strength in bearing down. Yet it must not be altogether avoided, for it is occasionally required just at the last. If in defecation it cannot be accomplished before the time, even by great exertion, how much less can strength avail in childbirth!

(11) Some one may ask, "How is one to know the proper time for bearing down?" I answer, it varies in different cases. When the child has come to the outlet, when all the joints are loosened, and the breasts relaxed, when the back and abdomen have changed, when there is urgent tenesmus and the eyes see stars flash-

ing before them, then it may be known that the time has truly come; just then let her bear down a moment and the birth will be completed.

(12) Some one may say, "I do not believe that the child can bore its way out, and I doubt if the ancients have taught this." I answer, that the ancients in their discourses treated only of the most important things; how could they explain everything? It is only men of recent times who, reflecting on the adage of the ancients, "the melon when ripe falls of itself," have attained to the knowledge of the fact that the child is able to bore its way out. They also considered the adage "pulling up grain to make it grow," and deduced from this that it was a great calamity to mistake false pains for a true birth. Moreover, it is well known that chickens when the period of incubation is finished are able to pick their shell and come out.

(13) Are there any medicines that hasten the birth, or is the skill of a midwife of any avail? The ancients record cases where the birth was delayed three or four years, but this was because of the child's unwillingness to be born. If it is unwilling to come out, who is able to force it? and if it will come, who can hinder it?

(14) Some may ask if the patient must never bear down too soon; is there not danger if she waits too long? I answer, there is not, because when the full time has come there is no such thing as its not being born. If such a thing should accidentally happen, it is because the child's strength is exhausted, and then it becomes necessary for the patient to lie down quietly. This will permit the child to rest in the womb, and

after a little while it will be born spontaneously.

(15) Some one may ask, "If the patient lies down when the child is almost born, will it not be impeded?" I answer, no; it is all the better to do so, because when turning is completed, if the patient sits up, then the child is as it were suspended, and how can it delay? If the patient lies down, so does the child, and what fear is there of hindering it? It may be asked, What is to be done if there should be obstruction? I answer that if there has been no obstruction for ten months, how can there be any now?

(16) Some one may say, "It is not good to bear the pains too long." I answer, it is best to do so. It has not been known that a woman with an illegitimate child has had a hard birth. Some may say that the idols help them, but it is not so, but because that, having become pregnant secretly, they fear for people to know, and they bear the pain to the utmost, when at last the child drops out. This is a very clear case.

(17) Some one may say, "I receive your instructions with reference to bearing down, but if one should err in using strength when the child is crosswise, I do not know if there is any rule for managing the case." I answer, there is. Let the patient be quickly put quietly in bed, and give her a large dose of the Kamihung kwai decoction, and with the hand gently return the arm inside. Then let her rest one night, after which the birth will take place spontaneously. But if it cannot be returned, what is to be done? If the patient is willing to sleep, there is no such thing as its not going back, but if it comes to

this, and she is not able to sleep and takes improper medicines, I cannot give any other directions as to the management of the case.

(18) Some one may ask, "Why is there prolapsus of the bowel when the child is born?" I answer, it is because of imperfectly bearing down. If the patient suffering from habitual weakness exerts all her strength in bearing down, then the blood and spirits of the whole body flow downward, and cause the bowels to follow the child. When this has occurred once, the road has become familiar, and it is likely to happen again. If one is able to wait till the melon is ripe, and it is ready to drop off, how can this strange disease occur?

(19) Some one may ask, "How is it with one who is delivered with a single pain, and there is no time to give assistance?" I answer that this is not to be considered unnatural, because when the vital spirits of the womb are perfect, the mother and child mutually separate, and the child comes out spontaneously. Even if you wished to keep it longer in the womb, it could not be done. It is the case with all females that each one has a fixed time of her own, and she has only to restrain herself until this time arrives.

(20) Some one may say "that midwives are not to be used." I answer that, since there is this class of women, it will not do not to use them, but we must use them, and not let them use us. We should rely altogether on our own judgment, and not listen to their orders. The great majority of midwives are stupid and ignorant. As soon as one enters the door, without asking how long the patient has been in labor, or even if her time has

come, she places the patient over the tub, and makes her bear down, asserting that the head is already born, or she causes her back to be twisted and her stomach rubbed, and perhaps introduces her hand to feel around, greatly to the injury of both mother and child. She is not willing to let things alone, and only desires to exhibit her own skill. There is another class of crafty and wicked women who borrow or counterfeit wonderful recipes. I cannot bear to speak of the misery which they cause. In the dialect of the *Ng Ut*, the midwife is called *Wan Po* (an old woman to rely on). In *Kong Wai*, she is called *Shau Shang Po*, and in *Fai Ning*, *Tsip Shang Po* (birth receiver). She is so called because, being old and experienced in the business, she receives the child when it falls to the ground and places it on the bed, and not because she is wanted to run about, putting her hands into all sorts of business. In every wealthy family, a midwife should be called to the house beforehand, because if the birth is slow, so many midwives will be rushing at the front and back doors that all will be confusion and disorder throughout the whole house. There is a saying that "in all the world there is nothing difficult, but fools make everything difficult."

(21) Some one may ask "if it will be right to use medicines which have virtue in such cases?" I answer, they are not to be used. Of all the ancient formulae, is there anything better than the pills of rats' kidneys and rabbits' brains? Is there any medicine more universally esteemed than "the restoring life powders"? I do not say that these are useless and never to be used; but still it is

better not to use them; for if the patient will only avoid bearing down, keep still and sleep, the child will be born spontaneously. When the labor is not progressing favorably, sleep is the most important.

(22) Some one may ask "if there is only advantage and no injury in taking medicines?" I answer, how can there be no injury? The rat kidney and rabbit brains pills diminish the spirits and injure the blood. The "resurrection pills" greatly damage the blood and injure the spirits, because in making them it is the custom to use fragrant and permeating medicines. At the period of lying-in, the pulse of the whole body is loosened, and the blood and spirits are weakened. Great injury will therefore result from the use of these weakening medicines after delivery. Moreover, they cause the pores to open and admit the wind, the damage of which cannot be estimated. In the resurrection pills the basis is Rhubarb and Hung fa, and the other ingredients are mostly of a weakening character. Now when the blood is already weakened, to injure it still more, will expose many persons to fever after childbirth, and the train of calamities will be illimitable. Every one will say there was mismanagement, but who will say that the medicine was to blame.

(23) These few formulæ have been pronounced divinely miraculous and wonderfully precious, by both ancients and moderns. If these are injurious, how is it with others? Orig-

nally those who prescribed them had good intentions, but they only knew the benefits, without being aware of the damage they could cause.

(24) Some one may ask, "Are there no medicines that can be used?" I answer, there are. The Syrup of the *K'a mi kung kwai*, and the powder of Buddha's hand, are infallible. During pregnancy the blood must be sufficient. When the blood is sufficient, it is like a boat with plenty of water, there is no fear that it will not float. It may happen that the mother is deficient in blood, or that the waters may come away too soon (in which case fish-gelatine must be taken) and the child is left too long. Now the two medicines above referred to are composed of *Kung Kwai*, and they possess the virtue of dissipating old blood and quickly producing new. These medicines are to be found everywhere and are easily obtained. They possess great efficacy in increasing strength, and preventing sickness after delivery. They are also in accordance with the doctrines of the ancient sages. The use of these divine receipts will confer benefits on all the world, and on future generations. But alas, people esteem lightly what they see, and do not use those things that are common, but they regard as valuable what they hear of. They must seek for strange and wonderful medicines. It does not matter whether they do good or harm if they are only strange. How sad is such a state of things!

(TO BE CONTINUED.)

Profuse Menstruation.¹

BY DR. CHARLES P. NOBLE,

PHILADELPHIA.

WE shall consider in this paper that profuse menstruation is synonymous with menorrhagia, or too great loss of blood at the menstrual period. Our subject will then embrace all those conditions which can give rise to this symptom. The terms profuse menstruation and menorrhagia are of practical value, and have come down to us from the older gynæcology, which was almost purely clinical, and dealt but little with the pathological conditions at the basis of symptoms.

The causes of menorrhagia are numerous. They are best grouped as constitutional, general, and local.

Among the constitutional causes we have the hæmorrhagic diathesis and scurvy. Among the general causes cardiac and hepatic diseases are the most important. Whatever will bring about a lack of tone in the general circulation will predispose to pelvic congestion and menorrhagia. Incompetency of the cardiac valves and cirrhosis of the liver are the most frequent of the general causes of menorrhagia. Chronic Bright's disease is also a cause of menorrhagia; but in such cases it is questionable whether it is the kidney-disease itself or the associated morbid condition of the blood-vessels and of the heart, which is the real cause of the profuse menstruation.

The local causes of menorrhagia are:

Pelvic congestion.

Endometritis.

Metritis.

Adenoma.

Polypus.

Fibroid tumors.

Carcinoma or sarcoma.

Retained products of conception.

Hæmatocele.

Certain diseases of the uterine appendages, especially cystic degeneration of the ovaries.

A glance at this long list of causes of menorrhagia makes it apparent that it will be impossible in a brief paper to more than glance at the nature of these conditions, and to summarize our knowledge of their treatment.

It is worthy of comment that the common causes of menorrhagia vary with the period of life to which the patients belong. In young virgins, shortly after the onset of puberty, menorrhagia at times occurs. Under these circumstances it is due to the fact that the menstrual function has not been perfectly established. There is lack of control on the part of the nervous system, both of the menstrual function itself and of the vaso-motor nerves in general. In the cases which have come under my observation this has appeared to be the cause of the profuse menstruation. These girls were plainly "growing too rapidly," they were "shooting up," and had the lax tissues characteristic of such individuals.

¹ Read before the Medical Society of the State of New York, February 7, 1894.

Menorrhagia in young childbearing women is usually due to some mishap in connection with pregnancy and parturition. An incomplete abortion, a subinvolved uterus, laceration of the cervix, and retroversion of the uterus are the most frequent causes of menorrhagia in women of this class. Inflammatory disease of the uterine appendages is also frequently present in women at this period of their lives, and menorrhagia due to this cause, with coincident endometritis, is quite common.

Menorrhagia occurring in women approaching the forties, and in those who are older, is of very suspicious import. In younger women, as a rule, it is a symptom of some curable condition, and is of importance only because of its severity,—the loss of blood producing anæmia, and breaking down the patient's health. In older women it has a very different signification. It is almost always due to gross disease of the uterus. These women, as a class, have passed the period of childbearing, and their sexual organs are being prepared for the retrograde changes which take place at the menopause. As we know, it is a law that tissues, especially glandular tissues, which are undergoing atrophic changes, are most apt to develop malignant growths. The uterus is no exception to this rule, and cancer is extremely common among the class of women under consideration.

The ancient tradition that it is natural and proper for a woman to bleed profusely and irregularly when she approaches the period of the menopause, is the indirect cause of many preventable deaths from cancer of the uterus. This traditional belief is generally accepted by women themselves, and, unfortunately, is advo-

cated by many physicians who have not given the subject of diseases of women much study. This teaching they received as students, and although it has long been shown to be false they have never abandoned it. It is natural that women should hold to this opinion, because it was quite current in the profession a generation or two ago. Popular beliefs are usually a fair reflex of what was the professional teaching of fifty or seventy-five years before. Believing it to be natural at their time of life, women disregard a menorrhagia when they are forty or fifty, which would cause them much uneasiness if they were twenty-five or thirty. The same is true of a leucorrhœa. In this way, but too often, carcinoma is permitted to develop to the stage of ulceration, and to that of secondary deposit, before the surgeon is consulted. Perhaps a physician is consulted at an earlier period who is a believer in the doctrine of climacteric hæmorrhages, and who soothes the patient with the assurance that there is no occasion for alarm, as "it will all come right at the change of life;" and so the poor victim rests in fancied security until she has a rude awakening a little later, and discovers that death is inevitable owing to the inroads which the disease has already made. My own experience is so distressing with reference to the management of cases of cancer that I feel very strongly upon this subject. About one-tenth of all the cases which come under my observation are the victims of cancer, and of these not more than one in ten have consulted me sufficiently early to enable me to offer any reasonable ground of hope of being able to affect a cure by a radical operation.

While it is true that cancer is a

very common, if not the most usual, cause of menorrhagia in women approaching the menopause, it is by no means the only one. Endometritis, adenoma, and fibroid tumors are also frequent causes at this period of life. It is a striking fact that whereas, in young virgins, the causes of menorrhagia usually have to do with the nervous system, and that in young childbearing women menorrhagia is usually due to some mishap connected with pregnancy, that in older women it is almost always due to gross disease of the uterus.

Treatment.—As loss of tone of the vascular system predisposes to menorrhagia, it follows that by building up the general health and improving the tone of the circulation much can be accomplished in any case of menorrhagia. Digitalis, strychnine, and ergot act directly upon the muscular structure of the heart and arteries, and lessen pelvic congestion, and can sometimes be depended upon to lessen hemorrhage from the uterus, provided the local morbid conditions are not of a very marked character.

The local treatment of menorrhagia depends, of course, upon the nature of its cause, so that the most important point is first to make a diagnosis. One of the drawbacks to the older nomenclature, to which our present title belongs, is that it does not tend to favor accurate diagnosis. There is no treatment for menorrhagia *per se*, and that fact should be distinctly emphasized. Many a woman has gone to her death from unrecognized cancer or cancer recognized too late for its eradication by operation, because the attending physician was satisfied with the diagnosis of menorrhagia, and addressed

his treatment to that entity. Every case of menorrhagia deserves careful study, and this is especially true when it occurs in women who are upward of thirty years of age. A careful inquiry into the case will usually put the astute physician upon the right track. In a case of short duration, in which the amount of blood lost is inconsiderable, especially if there be no complaint of pelvic pain and no breaking down of the general health, it may be permissible to treat it upon general principles,—that is, to regulate the bowels, the habits of the individual, to treat any symptoms which may be present, to prescribe regular habits of living, and to administer digitalis, strychnine, and ergot. Especially is this the case if the patient be unmarried, and if the discharges are free from offensive odor. The physician would be the more inclined to make use of general treatment only if in such a case the heart was found to be incompetent or the liver congested. But he should not permit himself to continue the treatment without an accurate diagnosis unless the patient promptly and steadily improves.

Accurate diagnosis is the key-note to success in the management of cases in which menorrhagia is a symptom. That this is a truism makes it none the less important that it be followed out faithfully in the management of each individual case. With the exceptions already referred to, and young girls, it should be the maxim of the practitioner that every woman having menorrhagia should have a careful pelvic examination. A careful examination should be made to determine whether or not pelvic congestion is present; the size,

shape, consistency, and position of the uterus; whether or not it be inflamed; whether it contains a tumor or the products of conception. Also the condition of the uterine appendages should be investigated. Whether or not these are healthy, and if not, the morbid condition present; whether this be a tumor, inflammatory trouble, or a hæmatocele. The condition of the general circulation, the heart and the liver should also be investigated, and in no case should an examination be considered complete until all of these conditions have been considered.

It may prove of interest if I give succinctly my own views concerning the management of the various conditions which give rise to menorrhagia.

Pelvic congestion, when not due to or accompanied by structural disease in the pelvis and when not the result of a recent parturition, is best treated by remedies addressed to the general health,—by tonics, by heart-stimulants, and by proper hygienic measures, including active out-of-door exercise. Pelvic congestion alone is seldom the cause of menorrhagia, except after parturition, but it predisposes to endometritis, and in this way indirectly becomes a cause.

Endometritis and *metritis*, when not complicated by inflammatory disease of the uterine appendages, are treated most satisfactorily by dilatation of the cervix and a careful and thorough use of the sharp uterine curette and cutting curette forceps. In this way more can be done in ten minutes than can be done in ten weeks in any other way. In my hands, in the class of cases referred to, the results obtained have been very satisfactory, and the

failures to cure and the recurrences have been exceptional. While stating this in general terms, it is admitted, of course, that the final stages of areolar hyperplasia are not specially influenced by the use of the curette, or by any other form of treatment except the ablation of the uterus.

Adenoma is likewise best treated by the use of the sharp curette.

Malignant adenoma calls for pan-hysterectomy.

Polypi should be removed *per vaginam*, and the endometrium thoroughly curetted.

Fibroid tumors, which are giving rise to menorrhagia, should be removed *per vaginam* when they belong to the submucous variety and can be removed from below, otherwise they should be removed by hysterectomy.

Carcinoma and *sarcoma* of the uterus call for pan-hysterectomy whenever the disease remains localized in the uterus; otherwise a partial operation, having for its object the removal of necrotic tissue, or the prevention of hæmorrhage or foul-smelling discharge, may or may not be advisable in individual cases. When the disease has involved the pelvic glands to any considerable extent, and when pain has become a marked feature in the case, I have seldom found much benefit from operation. It may prevent or control the foul-smelling discharges, but it seldom modifies the pain, unless this has been of an inflammatory character due to septic absorption from the necrotic surface of the cancer. Every case, however, should be judged upon its merits, and, as the result in all cases which are far advanced is an inevitable and more or less painful and disgusting death, it can at least be said that

operation can hardly make matters worse, even though it fails to afford much relief.

The treatment of *retained products of conception* is their removal.

Hæmatocele is due almost always to a ruptured extra-uterine pregnancy, and should be treated by cœliotomy, removal of the pregnant tube and of the effused blood.

When endometritis and menorrhagia are produced by inflammatory disease in the uterine appendages, or by ovarian tumors, the conditions are such, as a rule, to call for cœliotomy and the removal of the diseased appendage or appendages.

Cystic degeneration of the ovaries is at times a cause of menorrhagia and metrorrhagia. A number of such cases have come under my care. In these cases the ovaries were not markedly enlarged, and upon bimanual examination, it was only possible to say that the ovaries were rather large and tender. In these cases curettement, the rest cure, and all manner of internal medication was tried without avail, as the hæmorrhages recurred very soon, and the patients were not cured until the ovaries were removed. In each of the cases cure promptly resulted.

I have as yet said nothing about the use of electricity in the treatment of menorrhagia. The advocates of electricity claim that this is perhaps the field in which it is of the greatest value, and I am inclined to believe that, for simple cases of endometritis or metritis, it is capable of effecting a cure. But the method of treatment is tedious and painful, and, when sufficiently strong currents are employed to assure the effect upon the uterus, the method is not without danger.

As compared with the curette, I believe it is more dangerous, less certain, more painful, and much less satisfactory.

My own experience with the use of drugs in the treatment of menorrhagia has not been large. Digitalis, strychnine, and ergot have proved themselves in my hands to be of real value, and, except in those cases in which the local conditions have been so bad as to make it irrational to expect much effect from constitutional remedies, the results from the use of these agents have been satisfactory. My experience with other drugs has been small. Hydrastis canadensis has been used to some extent, and I have never been able to satisfy myself that it has the slightest action in the way of controlling uterine hæmorrhages.

There are two other forms of treatment of value, especially in bridging over an emergency in the treatment of cases of menorrhagia. These methods are systematic rest in bed and the use of the vaginal tampon. With the exception of those cases in which menorrhagia is due to malignant disease, to adenoma, or to the retention of the products of conception, rest in bed has a very positive influence in lessening the amount of blood lost. It is of practical value chiefly in the management of cases which are seen late, after so much blood has been lost that the patients are suffering from acute anæmia and profound prostration, so much so that it might not be safe to anæsthetize them in order to institute any radical method of treatment. This reference applies especially to cases of fibroid tumor. I have again and again in such cases, when consulted under the

circumstances referred to, been able to greatly improve the condition of the patients by putting them to bed, keeping their bowels regular, and perhaps administering strychnine, digitalis, and ergotine. I have in this way been enabled a number of times to do hysterectomy with success, when I am satisfied, had the operation been performed when the patient first came under observation, the result would have been fatal.

In certain cases the use of the vaginal tampon is of great service in temporarily arresting hæmorrhage. In the class of cases just referred to, when the bleeding is aggravated by the onset of the menstrual period, by firmly tamponing the vagina during the days when hæmorrhage otherwise would be most free, it is quite possible to limit the loss of blood to a very small quantity. This has been advocated as a systematic means of managing certain otherwise intractable cases of menorrhagia, and I can add my testimony to its value, at least as a temporary expedient in the management of certain cases of uterine hæmorrhage.

The ligation of the uterine arteries offers another means of controlling hæmorrhage from the uterus, no matter what the immediate cause of the hæmorrhage may be. As a preliminary operation, in dealing with a small class of fibroid tumors, in which a large amount of blood has been lost, and in which acute anæmia is present, this operation offers much. Likewise in certain cases of persistent hæmorrhage after the removal of the uterine appendages, in combination with thorough curettement of the uterus, I believe that this procedure will be of great value.

Certain cases of persistent and recurrent hæmorrhage have come under my observation, which have resisted all the usual methods of treatment. In such cases the cause is usually malignant adenoma. When the microscope clearly shows this to be the case, or when the trouble recurs time and again, after thorough curettement of the uterus, even though the microscope does not demonstrate the presence of malignancy, hysterectomy is indicated. In such cases it is a life-saving measure to prevent death from hæmorrhage. In cases in which the microscope does not show malignancy, it would be proper to make use of electricity, after the failure of curettement, before resorting to hysterectomy. In one case in which curettement repeated three times failed to cure, and in which the removal of the somewhat diseased uterine appendages (cystic ovaries, catarrhal salpingitis) likewise failed to cure, this result was accomplished by packing the uterus with gauze squeezed out of 50 per cent. chloride of zinc solution, which brought away a slough of the endometrium, and a part of the underlying muscularis. This very radical and somewhat hazardous method of treatment I should recommend only in exceptional cases, and not in any case in which the appendages have not been previously removed.

I have as yet made no mention of the treatment of menorrhagia by the application of carbolic acid, iodine, perchloride of iron, nitric acid, or other caustics to the endometrium, either by means of a cotton-wrapped applicator or a uterine syringe. The reason for this omission is that I believe these methods to be either inefficient or dangerous or both. The

milder escharotics are inefficient; the more powerful are dangerous in that their action cannot be controlled within conservative limits. The experience of the generation preceding us has so well demonstrated the dangers attendant upon this form of treatment that it is unnecessary for us to go over the same ground.

Conclusions.—(1) Menorrhagia in young virgins is usually functional, due to disturbances in the vaso-motor nervous system, or to relaxation of the tissues; in general caused by the rapid growth which at times takes place about the time of puberty. Because of its pathology menorrhagia in young virgins is usually curable by general treatment.

(2) Menorrhagia occurring in young childbearing women is usually due to some mishap in connection with pregnancy or parturition, such as the retention of products of conception, laceration of the cervix or perineum, retro-displacement of the uterus, subinvolution, inflammation of the uterine appendages, and pelvic congestion. Menorrhagia in this class of women is curable. It usually requires local treatment of an operative nature. When due to subinvolution and malpositions of the womb, operation is unnecessary.

(3) Menorrhagia in women approaching the forties and in those

who are older is usually due to gross diseases of the uterus, such as fibroid tumors, polypi, adenoma, or malignant tumors. Menorrhagia occurring in this class of women, except when due to advanced malignant disease, is curable, but almost invariably requires operative treatment applicable to the disease present in the particular case.

(4) As menorrhagia is a symptom and not a disease, an exact diagnosis is requisite in every case. With the exception of young virgins it is desirable that a physical examination of the pelvic organs be promptly made. The importance of this examination is the greater with the increasing age of the patient. Special considerations should influence the practitioner to postpone the local examination in the unmarried unless it be reasonably certain from the symptoms that gross local disease is present.

(5) There is no treatment for menorrhagia *per se*. By general measures, such as rest in bed and the use of digitalis, strychnine, and ergotine, pelvic congestion can be lessened, and in that way menorrhagia can be, at least in part, controlled; but it cannot be too strongly insisted upon that in every case of menorrhagia an exact diagnosis must be made and the appropriate treatment addressed to the disease which is present.

The Treatment of the Pedicle in Hysterectomy.¹

BY R. S. SUTTON, M.D.,
ALLEGHENY, PA.

THE accompanying tumor was removed, four weeks ago, from a very fat woman, aged 36 years, native of Virginia. The operation was performed under chloroform narcosis in the Trendelenburg posture. The steps of the operation were as follows: A ligature was placed in the broad ligament on each side, securing a good portion of the ligament,—leaving the tube, ovary, and parovarium on the uterine side. To prevent reflux, this was secured prior to cutting with a pair of Dudley's broad ligament forceps. The second ligature of broad ligament on each side was supposed to secure each uterine artery. Division of these sections of the ligaments released the uterus. A knife was carried across the front and rear of the uterus through its peritoneal covering. This was pushed

downward, exposing the upper end of the cervix, where the amputation was then made. One small artery required a ligature. The peritoneal flaps were now stitched over the cervix. The latter was cut V-shaped to some extent, and the same suture that secured the peritoneum secured the flaps of the cervix. Finished, the stump stood out, covered with peritoneum, quite prominently on the pelvic floor. In the many years I have been doing abdominal surgery, I have done hysterectomy in all sorts of ways successfully. I am in doubt if any method can be uniformly depended upon, yet every case should be considered on its own merits. The elastic ligature or wire serre-nœud is a good method if the patient is not too fat, and amateur operators will do well to begin with it.

A New Uterine Curetting Forceps.

BY CHARLES P. NOBLE, M.D.,
PHILADELPHIA.

I HAVE long felt the need of a better instrument for curetting the fundus uteri than any now in use. I have used the Sim's curette for removing the diseased mucosa of the anterior

and posterior walls of the uterus, and the Martin curette (Recamier-Roux) to remove that on the fundus. It is comparatively easy to thoroughly curette the anterior and posterior walls, but, if the uterus is enlarged, it is very difficult to deal

¹ Read before the Obstetrical Society of Philadelphia, February 1, 1894.

satisfactorily with the fundus. This is especially true when the fundal mucous membrane is the seat of adenoma.

I wish to present a cutting curette forceps which I have devised espe-

of the forceps: Total length, 8 inches; length of handle to pivot of lock, 5 inches; length from cutting-blades to pivot of lock, 3 inches; width of fenestrated cutting-blades, $\frac{3}{8}$ inch.

A glance at the illustration will

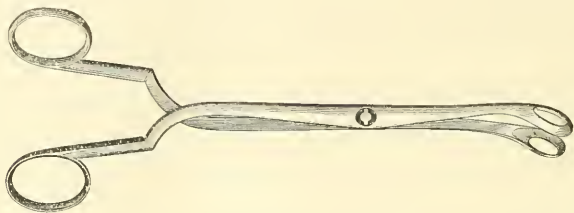


FIG. 1.

cially for curetting the fundus uteri. I have used it for some months, and am much pleased with its work. The forceps is very useful also for removing small polypi.

The following are the dimensions

show that the well-known curetting forceps, used for removing adenoid growths from the vault of the pharynx, was used as a model, such changes being made as to adapt it to uterine work.

The Diagnosis of Intra-pelvic Adhesions.¹

BY WILLIAM B. DEWEES, A.M., M.D.,

SALINA, KANSAS.

A CORRECT diagnosis is the requisite of intelligent treatment and prognostication of disease. Nature, on her part, does impose the requisites on ours; what we must do to be able to clearly recognize disease is the great business for us all to know, lest we fail to institute proper treatment and to give reliable information to the patient.

The writer assumes, without fear of contradiction, that we all have had the painful experience of frequently seeing people suffer and die, without a correct diagnosis having been made of the cause of their suffering and death.

And, again, that we all have met with many cases which have not only been incorrectly diagnosticated, but, as a natural consequence, found the treatment wrong and causing much distress. To go a step further, and

¹ Read before the joint meeting of the Golden Belt and Eastern Kansas Medical Societies, held at Topeka, Kansas, January 4, 1894.

be true to ourselves, let us confess with equal frankness the additional fact, that we have observed all this not only in the labors of others, but likewise actually in our own individual work. This statement argues that we either do not fully know our business or that we are not fully awake to our duty. Presumption having it that we are all good and earnest physicians, and that as such we will not allow ourselves to be found guilty of negligence, but rather that circumstantial evidence points to the fact that we are wanting in the knowledge of the *ensemble* of the symptomatology to fully disclose the hidden workings of nature in disease.

With these prefatory remarks, your thoughtful attention is invited for a brief while to the consideration of the diagnosis of one class of pathological conditions,—namely, *intra-pelvic adhesions*. In selecting this subject, the writer is cognizant that it may appear at first thought to be too simple for the occasion; but, nevertheless, when we reflect that no one has the right to despise the day of small things, it is believed with full confidence that you will, however, admit it to be of sufficient importance to be considered, and worthy of your full, free, and earnest consideration. The only apology offered being that these abnormal conditions are almost daily coming under the care of the active general practitioner, as well as the specialist, and that little or no special, clear, and intelligent reference to their diagnosis is to be found either in our text-books or works of reference.

That we may properly consider this all-important subject, it is essential that we begin in the beginning, by

clearly recalling the normal condition of the pelvic viscera and adjacent tissues, together with their relation in a normal pelvis. For unless we at all times, when endeavoring to make a correct diagnosis, keep afresh and foremost in our minds our knowledge of the normal anatomy of the parts within the pelvis, we can scarce hope to intelligently recognize any abnormal conditions that may exist. This knowledge is to be acquired chiefly by the sense of touch. The finger must become educated to know and trained to do, by frequently repeated digital examinations, made through the vagina and the rectum, of the pelvic contents in healthy women. That the examining finger may become fully proficient in this art, it is absolutely necessary that these searching vaginal and rectal digital excursions be made with each individual woman to be so examined, placed in each of the following four classic postures, preferably in the order given,—namely: the erect, the dorsal, the semi-prone, and the genupectoral.

Having acquired the skill to clearly recognize the normal vagina, rectum, uterus, tubes, ovaries, etc., and their relations in the normal pelvis, with the varying degrees of normal deviation in different women, we are prepared to learn to recognize abnormal conditions. The class of female patients that come to us suffering from intra-pelvic adhesions will almost invariably give us a history of some disorder, distress, or abnormal condition within the pelvis, referring its beginning to some accident, or during menstruation, or following a childbirth, or a miscarriage, or an attack of gonorrhœa, or in connection with

syphilitic or malignant disease. Our first duty, then, is to note the history, from which we conclude as to the necessity of an examination. If the history points to previous inflammation of any kind within the pelvis, together with painful or disordered menstruation, or bearing down intra-pelvic pressure, painful or disordered defecation or micturition, or painful coitus, or any two or more of these abnormal conditions combined, we may feel justified to advise an examination for the purpose of determining as to whether any intra-pelvic adhesions exist. The consent of the patient having been given, it is meet that we should refresh our minds, before proceeding with the examination, by clearly recalling two essential factors,—namely: first, the principal landmarks of the normal condition of the intra-pelvic viscera, and, second, that intra-pelvic adhesions are seldom to be found except in complication with some visceral trouble.

With reference to the first, the vagina will be found unobstructed; the rectum empty; the uterine os with the vaginal cervix within easy reach of the finger and occupying a position in the upper posterior portion of the vagina, facing downward and backward; the uterus, freely movable, occupies a position in normal relation with the bladder, vagina and rectum, with its fundus pointing upward and forward to a transverse line about midway between the umbilicus and the pubes; the tubes and ovaries, together with the broad ligaments, are to be felt as soft, narrow bands running on a direct line from the sides of the uterus, in a somewhat half-circular course to the pelvis, the ovaries being located at the distal extremities. Here,

then, we have the leading landmarks of a typical normal condition. It must be remembered that this typical condition will be found to be considerably deviated from, in the same individual in different postures as well as in different individuals in the same postures; such as the uterus occupying a different plane in different women, or is discovered nearer to the vulva in some than others, or the ovaries easily discernible in some cases and impossible in others, etc., but still to be in a normal state. Thus we will find considerable variation within the bounds of health.

The examination is to be made with the patient placed in, at least, the first two of the aforesaid classic postures; and if any evidence of adhesions be found, the patient should be further examined in the other two of the four classic postures, before a definite conclusion be arrived at. True, the expert may be able to satisfy himself and conclude correctly with an examination made in only one posture,—the dorsal or semi-prone,—but not so with the average active general practitioner, who comprises by far the greater portion of the profession, and who is likewise called upon to make an intelligently correct diagnosis in such cases. The examiner, after carefully cleansing his hands with soap, brush and water, anoints his right hand and first examines with the index finger alone, placing it on the perineum and gliding it over the posterior commissure into the vagina, with the palmar or flexor surface turned posteriorly. Whenever it is found necessary he inserts the middle finger also, and thus secures the additional advantage of at least half an inch farther reach.

It is specially commended that the finger or fingers be always introduced only over the posterior commissure and with the palm facing the sacrum, and to always maintain this position of the hand during the entire examination, except in bimanual manipulation, when frequently it will be found of advantage to turn the palm facing the right thigh. It is also to be remembered that the less force used with the end of the examining finger the more perceptive will be the sense of touch. Should any force be required to reach high enough, it is better that the elbow rests against the body of the examiner and thus made to push the hand forward, carrying the perineal tissues upward, and allowing the end of the finger as free as possible. This may all seem trivial, but will be found of the greatest value if adhered to in practice. If by passing the finger we find some or all of the conditions which we have learned to recognize in a normal pelvis absent, the uterus enlarged and out of position, occupying a plane lower than normal and immovably fixed, or either antiverted or antiflexed, retroverted or retroflexed, and capable of being partially or fully repositioned to or in its normal position, but relapsing back into its abnormal position immediately upon being released; if we find an elongated body, sausage-shaped, or either one or both sides of the uterus, extending away from it toward the pelvis, tender to the touch or possibly not; if we find the *cul-de-sac* of Douglas wanting, and its space occupied by an oval body, tender to the touch, etc.; if one or all of these conditions exist we may feel reasonably certain that intra-pelvic adhesions exist. That we may have counter-

proof to more certainly satisfy ourselves in arriving at a diagnosis by what we choose to call exclusion, it becomes necessary to examine our patient further by both the bimanual vaginal and bimanual rectal touch. The bimanual rectal and vaginal touch should be brought into use in connection with the digital examination in both the dorsal and semi-prone postures, and in all doubtful cases we should go still further and call to our aid the speculum and the sound and make also an instrumental examination.

The writer does not wish to be understood that he undervalues or disregards the great advantages afforded by the use of the speculum and the sound as instruments of aid in diagnosing. But he desires to impress the fact that they are of value only as supplementary means, and that they are quite as often contra-indicated as dangerous in some cases, as indispensably of value in others. Nevertheless, it is confidently commended that, as a rule, intra-pelvic adhesions can be diagnosed, as well as most all other pathological conditions within the pelvis, without the aid of either, simply by the digital and bimanual touch. This is probably in the nature of a surprise to those who have not as yet acquired this full knowledge of the educated sense of touch. But, no doubt, those who are wanting in this respect owe their lack of training to the fact that our colleges lay too little or no requirement upon digital physical examination of the pelvic contents.

If after all these methods of examination we find it impossible to replace the malposed or imprisoned uterus, or ovary, etc., we may feel

confident that adhesions exist. This brings us to the diagnosis of the different kinds of adhesions found in the pelvis. Here again the history obtained very largely guides us to our diagnosis. If the patient gives a history of a slight accident or fall, such as frequently occur in jumping, skating, bicycling, horse-back riding, or slipping down steps, etc., especially if the patient be a girl, without active inflammation following, we would look for but slight adhesions. If the history given includes a miscarriage or a child-birth with inflammation, and more or less prolonged suffering, it would probably be difficult to correctly diagnose the full extent of the adhesions. If the history is that of syphilis or gonorrhœal infection, or malignancy, the diagnosis would depend largely upon the extent and degree of the accompanying inflammation. The different forms or adhesions found have been variously named in accordance with the cause of the condition and the gravity of the case, as elastic and inelastic, major and minor, solid and semi-solid, dense and loose, extensive and slight, thick and thin, etc. But for clinical purposes the adhesions found in the pelvis may be included in two classes, elastic and inelastic. These may again for convenience be

sub-divided into extensive and slight, and what common usage has styled as "string-band" adhesions.

To recapitulate, the following points are commended to your care for reliance, when endeavoring to undertake an examination for the accurate diagnosis of intra-pelvic adhesions:—(1) The history of the case, which can always be gleaned if time and patience be taken; (2) the normal anatomy of the pelvic viscera and tissues as found in a normal pelvis; (3) the deviation, if any, from the normal to be found in the patient under examination; (4) the extent of adhesion existing is to be determined by the ease with which the uterus or ovary can be replaced, or the persistency with which the organ returns and remains in its old position. To this must be added the knowledge to be gained by the digital as well as the bimanual vaginal and rectal touch.

While there are other conditions of adhesions within the pelvis which the title of this paper include, such as occur between the omentum and the bladder, the intestines and pelvic viscera, etc., the writer has aimed principally to refer to adhesions as resulting from inflammation, and existing between the uterus or the appendages and the pelvic wall.

The Treatment of Chronic Diseases of the Uterine Appendages.¹

BY J. ADRIAN GOGGANS, M.D.,
ALEXANDER CITY, ALABAMA.

THERE is such a diversity of opinion as to the proper treatment of the

chronic diseases of the uterine appendages, that we are sometimes almost constrained to believe that in many instances prejudice has taken the

¹ Read before the Tri-State Medical Society, October, 1893.

place of calm judgment. Most of these differences of opinion are brought about by the fact that the proper treatment can only be instituted after an exact diagnosis has been made. My experience does not lead me to believe that to make a diagnosis in many cases is such an easy thing to do, and I must believe that all abdominal surgeons who have much experience likewise encounter more or less difficulty in the diagnosis of many cases; nevertheless, I believe that we have arrived at that degree of diagnostic skill where it is unnecessary that we should know in every instance the exact pathological condition that may be present in order to carry out the proper treatment.

It should be the duty of every general practitioner of medicine to familiarize himself with the details of a thorough examination of the contents of the pelvis and thereby become as expert as possible in the diagnosis of the diseases of the uterine appendages.

It was only a few weeks ago that I was called in consultation to a lady, 20 years of age, who had been treated for fever and whose ovaries and tubes I here show you which are the seat of cystic degeneration and salpingitis. Dr. Noeggerath, Mr. Tait and Professor Virchow have taught us much of the pathology, prognosis and treatment of these diseases, and shown us plainly how it becomes necessary to remove the tubes in salpingitis, although the only symptoms present may be pelvic pain accompanied by slight fever, but rendering the patient unfit for the ordinary duties of life. The skill necessary on the part of general practitioners of medicine into whose hands nearly all such cases

come primarily, is doubly important, from the fact that this class of patients are prone to have, from very slight influences, and especially from minor operations, *recurring attacks of salpingitis and pelvic peritonitis, and the baneful sequelæ which follow them.* According to my experience, these diseases of the ovaries and tubes are almost always developed as sequelæ of some pre-existing disease of the uterus. And I wish to emphasize the fact that *endometritis is the most important among the list of diseases peculiar to women*, since it is almost invariably the exciting factor in chronic salpingitis, ovaritis, and even peritonitis; and just so long as the disease of the uterus exists there can be no tendency on the part of the ovaries and tubes to recover. This ætiology of the chronic diseases of the uterine appendages is made the more apparent when we remember that endometritis may be distinguished clinically as simple, gonorrhœal and septic.

I do not wish to enter into the details of the different modes of treating endometritis, and will only mention the general plan which I have adopted, and which has been fairly satisfactory in my hands. Appropriate general treatment first receives attention, and consists in the administration of laxatives and those remedies which promote digestion and assimilation.

This is followed by absolute rest, vaginal irrigations, sitz baths, and in some cases ergot and hydrastis. Locally, I apply every fourth or fifth day some mild cauterizing agent, and generally prefer a solution of iodized phenol in glycerine, to the entire uterine mucous membrane, either with or without previous dilatation, and

follow this up with tampons of cotton saturated with boro-glycerine in sufficient quantity to elevate the uterus. Many of the milder cases of simple endometritis soon yield to this treatment, but in case they do not, I resort to curettement, packing and drainage; but there is a class of cases of endometritis which are complicated more or less by chronic metritis, and which will never yield to curettement and cauterization; much interstitial or glandular proliferation has already taken place, and it is in this class of cases that I attach much importance to amputation of the cervix, thereby bringing about a general transformation of the whole uterine tissue. Endometritis most generally yields to this treatment, but there is still another class of cases where a most dismal prognosis awaits them. Interstitial changes extend to the peritoneal covering, pass into the tubes and render such women sterile and miserable the remainder of their lives. It is a plain fact, then, that the treatment of endometritis, and its baneful sequelæ, salpingitis and pelvic peritonitis, depend upon a perfect diagnosis; and this accounts for such differences of opinion on the part of gynecologists, as to when the medicinal treatment should end and where the surgical treatment should begin. I wish to say, however, that there are many cases of chronic affections of the uterine adnexa, where such extensive interstitial and glandular changes have not taken place, and consequently are amenable to medicinal and mechanical treatment. I will cite a case to illustrate this.

Patient 20 years of age, married. Six months before I saw her she sustained a fall which was followed by

pain in the pelvis. For the past three months she has had many convulsions; now has profuse leucorrhœa, and pain during sexual intercourse; one ovary found in Douglas' pouch, enlarged and tender; the ovary was elevated and kept up by tampons saturated with a 10 per cent. solution of ichthyol in boro-glycerine, and she made a good recovery.

In all cases of disease of the uterine adnexa, rest, both physically and sexually, are absolutely necessary. In addition to the general plan of treatment already mentioned for endometritis, I attach much importance to ichthyol in from 5 to 10 per cent. solutions in boro-glycerine, applied to the vault of the vagina on tampons of cotton sufficient in quantity to cause some pressure, and elevate the uterus and appendages. Under this treatment the tenderness may subside, and the inflammatory thickening may be gradually removed. This plan of treatment certainly deserves our serious consideration before such patients are subjected to the dangers of laparotomy. To be able to distinguish this class of curable cases from those which I will designate as being beyond the border line, interstitial and glandular changes already having taken place, is often not such an easy thing to do, and it is only by special tact that such a diagnosis can be arrived at.

Now, the three principal symptoms of gross disease of the uterine adnexa should never be lost sight of. These are *first*, recurring attacks of pelvic peritonitis, from which the patient can rarely recover entirely. *Secondly*, hæmorrhage, which may be profuse and irregular. *Thirdly*, pain, which is generally most severe in the pelvis.

In spite of all plans of palliative treatment, such patients become more and more prostrated. In fact they are usually made worse by pessaries and intra-uterine applications, and especially after the use of the curette. Relief only comes after the removal of the uterine adnexa.

These specimens, which I hold in my hands, are the ovaries and tubes removed from the pelvis of a woman 39 years of age; she married at 14 years of age, had eight children, the youngest 3 years of age; eighteen months before I saw her she had an abortion, which was followed by severe fever; she had loss of appetite; pulse, 90; temperature, $99\frac{1}{2}^{\circ}$; two small lacerations of the cervix and endometritis; removal of the appendages was advised in this case, and an examination of the specimens will show large, tender and cystic ovaries accompanied by double salpingitis, and is of that form of salpingitis in which there is no dilated tube filled with pus, but a thickened tube wall in which there is a moderate amount of inspissated pus. Now, the principal symptom for which this patient sought relief was hæmorrhage, though she suffered much pain in the head, accompanied by fever and insomnia. She was well within three weeks, and has now the normal sexual appetite, and no return of the menstrual function.

I make it a rule to regard, with surgical suspicion, all patients, who are constantly incapacitated from pain.

The principal signs which indicate that an operation should be performed are:

(1) Those attending pelvic peritonitis, accompanied by tortuous and distended tubes, which may be usually

felt in Douglas' pouch behind the uterus. This condition may be preceded by the history and symptoms of an abortion, a gonorrhœa, or a tubal pregnancy.

(2) The physical signs of enlarged and tender ovaries due to chronic abscess.

(3) The physical signs of prolapsed and tender ovaries, accompanied by irregular hæmorrhages, and incapacitating pains.

(4) Some few cases where dysmenorrhœa is the principal symptom, with a probability of its being kept up by chronic disease of the ovaries and tubes.

(5) Where hæmorrhage is the principal symptom, accompanied by the ordinary signs of grave pelvic disease.

(6) In a few cases of general peritonitis preceded by the symptoms of rupture of a pre-existing pelvic abscess, ovarian abscess, pyosalpinx, or abscess in the appendages developed during the progress of puerperal septicæmia.

DISCUSSION.

Dr. Richard Douglas endorsed the position taken by the author as to the indications for operation, but said each case must be decided on its own merits. Removal of the appendages will not cure hæmorrhage from the uterus, the proper treatment of which is divulsion of the cervix.

Dr. P. L. Brouillette was surprised that in the discussion electricity had not been mentioned. In his experience many of these cases had been cured by the use of this agent without curettement or removal of the ovaries.

Dr. H. Berlin thought it a mistake

to remove the uterine appendages for hæmorrhage. Electricity applied with positive pole inside the womb will control hæmorrhage by destroying the mucosa if a strong current is used. It would be impossible for the woman to conceive after this.

Dr. G. W. Drake said that most physicians had not been educated so as to use electricity intelligently. It might relieve hæmorrhage by reflex action.

Dr. Brouillette thought that electricity should be tried before any operation was advised.

Dr. Goggans (closing the discussion) said he was not in favor of removing the ovaries for mere symptoms, but only for organic disease. Most of the general practitioners who use electricity fail to make a differential diagnosis. In the cases presented the conditions show that no cure could have resulted from the use of electricity.

The Perfect Needle-Holder.

BY CHARLES P. NOBLE, M.D.,

PHILADELPHIA.

EVERY active surgeon has large opportunities for employing a needle-holder. Every gynæcologist who does plastic work upon the genito-urinary organs, and who practises abdominal surgery after the modern technique, is obliged to employ a needle-holder. It is because the needle-holder is so valuable an instrument that many surgeons have endeavored to improve upon the patterns in use. The result is a multiplicity of patterns, many of which are crude and useless.

I desire to present an old needle-holder so improved by various surgeons and instrument-makers that I think it may fairly be called the perfect needle-holder. As I am not the inventor of the instrument, I feel the more free to insist upon its merits. The pattern upon which the instrument is based is known to "the trade"

as the Reiner needle-holder. One evolving the present pattern, advantage has been taken of all the improvements made by others, a new feature has been added, and the dimensions have been somewhat altered to accord with my theories as to what a needle-holder should be.

The following are the measurements of the instrument: Point to pivot of joint, $\frac{7}{8}$ in.; from pivot to joint of lock, $3\frac{3}{8}$ in.; from lock to end of handle, $3\frac{1}{16}$ in.; total length of needle-holder, $7\frac{1}{16}$ in.; width of handle at widest part, 2 in.; weight, $3\frac{1}{4}$ oz.

A perfect needle-holder should have the widest range of usefulness. It should combine in one instrument the advantages possessed by various others. It should be capable of grasping both large and small needles, and both straight and curved needles. It should not only be available for sutur-

ing on the surface of the body, where room is abundant and suturing simple, but also in the recesses of the body, as in the upper part of the vagina and in the depths of the pelvis, where suturing is difficult and room is at a premium. The needle-holder under consideration presents all of these advantages. Some of its points of excellence are worthy of comment:

(1) The *beak* of the instrument is narrow and tapers towards a point.

blades of the holder being separated by a spring. Thus the locking apparatus is simple and almost automatic.

(5) The *handle* is of such a form as to fit the hollow of the hand. This permits the free use of the thumb in managing the catch, and is of special service when curved needles are employed, because these are best passed by a movement of supination of the forearm, wrist, and hand.

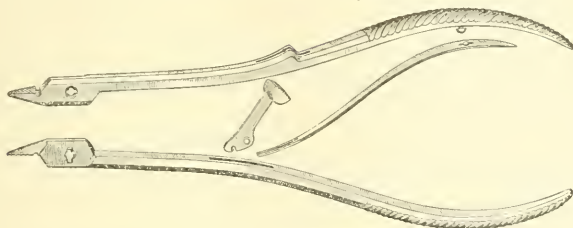


FIG. 1.

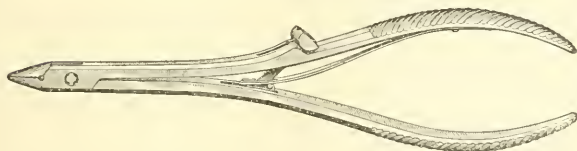


FIG. 2.

Thus curved needles can be grasped without breaking them.

(2) The *joint* is of the French pattern. All the parts of the instrument can be taken apart easily to be cleaned.

(3) The *shank* is light enough to be elastic, but heavy enough to be strong. This feature permits the grasping of large or small needles equally well.

(4) The *lock* or *catch* is self-locking when the needle is grasped. The holder is unlocked by simple pressure of the thumb against the catch, the

The handle of the instrument presented is intended for a hand of medium size. An operator with a very small hand could work better with a needle-holder having a slightly narrower handle ($1\frac{3}{4}$ in.), and the reverse is true of an operator with a very large hand, especially should the joints of the thumb not be supple. This last matter is one of great importance, as, should the handle be too narrow or too short for the hand that uses it, the unlocking of the catch becomes extremely awkward.

SOCIETY PROCEEDINGS.

Massachusetts Medical Society, Section for Obstetrics and Diseases
of Women, Suffolk District, Boston.

DR. GEORGE H. WASHBURN, SECRETARY.

DR. C. W. TOWNSEND read a paper on "Cases of Placenta Prævia at the Boston Lying-in Hospital."

Among the 6700 deliveries at the Boston Lying-in Hospital in the past twenty years there are twenty-eight cases of placenta prævia recorded.

This is four times larger percentage than that given by Müller, and is due to difficult cases being sent to the hospital.

Of the twenty-eight cases fifteen were marginal or lateral, the placenta reaching to the border of the inner cervical ring; eight were partial, the placenta overlapping the os to a greater or less extent, and five were central, the implantation of the placenta being directly over the os.

Proportion of multiparæ to primiparæ seventeen to eleven. In the partial cases three primiparæ and five multiparæ. In the central cases one primipara and four multiparæ.

Of the fifteen marginal cases four had no hæmorrhage until there were recognized labor pains; two flowed about once a month so as to simulate true menstruation; three began to flow in the seventh month; two at eight months, and three at eight and a half months; one not stated.

Seven went to full term; six gave birth at eight months, two of these being delivered artificially. Two gave

birth at seventh month, one of these artificially.

Hæmorrhage slight in six; considerable in four; profuse in three; while in six the records spoke also of postpartum hæmorrhage.

Two cases were delivered by manual dilatation and version, one at seventh, other at eighth month. Both had lost considerable blood, one by slow dribbling, the other by a sudden gush of one and a half pints. In the former case manual dilatation took five, in the latter fifteen minutes.

Marginal Placenta Prævia.—In the fifteen cases the mothers all recovered. The child born naturally at seventh month, died in two days; one born by version died in twenty minutes; one at eighth month, where delivery was hastened by colpeurynter, was still born.

Partial Placenta Prævia—eight cases. In two there was no hæmorrhage till labor began, at full-term in one case, a week ahead of time in the other. In another case there were slight hæmorrhages twice a month through nine months. In the others first hæmorrhage was at fifth, sixth, eighth, eighth and a half and ninth months respectively. Five were delivered at full term, only one by natural means; two were delivered at eight months, one by version, one

spontaneously; one was delivered at sixth month without help. In this case profuse hæmorrhages every day for three days, when the dead foetus was expelled, the edge of the placenta overlapping the head one-third of its extent.

Hæmorrhage was slight in two; considerable in two, and profuse in three of these cases. In two well-marked post-partum hæmorrhage.

Five of these cases were delivered by internal podalic version, two having been first tamponed.

All eight mothers recovered and four infants; two of these were born spontaneously, one being non-viable, the other macerated. Of the two still-born infants delivered by version, in one case there was a complicating ovarian tumor.

Central Placenta Prævia—five cases. All were delivered by version, a tampon having been first used in two cases. Three mothers died and four infants. All these cases entered the hospital blanched from loss of blood, two being almost in extremis.

In one of the cases where the mother recovered—multipara (VIII) 34 years old—there was no hæmorrhage till the eighth month. Brought to hospital eleven hours after a sudden profuse flow, plugged with a sponge and colpeurynter. Extremely blanched; pulse 120 to 140; respiration 50; os half an inch in diameter. Manual dilatation done in ten minutes. Dead and slightly macerated child delivered by internal podalic version. Mother recovered after moderate attack of septicæmia, due probably to the septic sponge with which she entered the hospital.

In the other successful case—multipara (II), 21 years old—there were

several slight hæmorrhages at eight months. A week later there was a very profuse one, for which she was tamponed at 2 A.M. Entered hospital at 1 P.M. of same day, in blanched condition; pulse 100, weak; foetal heart 210, irregular. This patient was seen by Dr. Townsend, who etherized and at once removed packing. Os one and a half inches in diameter and covered completely by placenta. While examining, blood suddenly spurted out copiously. At once peeled off placenta on left border, quickly finished dilatation of os, passed hand up and turned. The half breech checked the hæmorrhage. The head was followed immediately by placenta. Uterus contracted well, but at least a quart of blood was lost, and then there was considerable post-partum hæmorrhage, controlled by pressure and friction externally and hot intra-uterine douche. Mother and child discharged well on fourteenth day.

DISCUSSION.

Dr. EDWARD REYNOLDS. Marginal placenta prævia is generally easily managed. Few emergencies are more dangerous than the central placenta prævia.

The question of treatment depends largely upon the period of pregnancy at which the first hæmorrhage occurs. When it occurs during the second or third month of pregnancy we should interfere as soon as diagnosis is established. After the completion of six calendar months it may be allowed to go on until the child is viable, provided the woman can have a physician in constant attendance, or can be in hospital where some physician is within call at any time. This,

so long as the hæmorrhages do not distinctly weaken her and raise her pulse. If these conditions do not exist the foetus should be sacrificed, and this as readily for a moderate hæmorrhage as for a considerable one. A first hæmorrhage of one drop, in case of placenta prævia, may be followed at any moment by a fatal hæmorrhage. Even a marginal placenta prævia, if remote from a physician, is a dangerous thing to let alone. Dr. Reynolds saw in consultation a woman six and a half months ago. She had had moderate flowing twice, checked at once by putting her to bed; she was in good condition; edge of a marginal placenta prævia could be felt through the cervix; she lived next door to her doctor, and within a hundred yards of two other competent physicians; arrangements were made to have one within call at any time; advised carrying case on till child was viable, keeping her in her rooms, and in bed when any question of flowing; she went a month without losing a drop of blood; then physician was called, to find her exsanguinated within a few minutes of first appearance of bleeding; he etherized, dilated, turned and delivered a living child; there was but slight post-partum hæmorrhage, but patient died within an hour.

When the first hæmorrhage appears after child is viable should deliver without delay: internal podalic version generally the best treatment. In marginal cases, or those of partial placenta prævia, version may be performed with two fingers, through the undilated os, a tamponade of the lower segment of uterus by the half breech and waiting.

As soon as diagnosis is made the

finger should be passed into cervix, and the edge of the placenta detached for two or three inches from the margin of the os. This is followed by increased dilatation of the os, and prompt, though temporary, arrest of bleeding; this gives patient a little time to rally, and gives the physician time to make his preparations. He should not leave the patient, however, as hæmorrhage may recur at any moment.

Every precaution should be taken to prevent post-partum hæmorrhage, which is especially liable to come, and the extra loss of blood can ill be spared. This is best accomplished by guarding the fundus with the hand for every second from the moment extraction begins, until the uterus is sufficiently retracted to be safe. At every sign of softening, rapid, light friction should be applied through the abdominal wall over the fundus.

Dr. R. A. KINGMAN reported "Two Cases of Acquired Complete Atresia of the Vagina." Mrs. N. E., widow, 30 years old; in St. Elizabeth's Hospital, July, 1891; only child born eight years previous, after four days of labor; puerperium marked by fever, pain and tenderness over abdomen, lasting four weeks; urine trickled away through vagina; menstruation never returned, but increase of backache and abdominal pain every month.

Two months previous to admission had been operated on by physician in neighboring city for complete closure of canal; bladder was opened, but cervix not found.

Patient was etherized; rectal examination showed a small retroverted uterus, and between it and the opening left from previous operation a bag of fluid; this was opened, and on

its upper surface the small cervix found; a small flap was obtained to cover the bladder opening.

Patient made a good recovery.

CASE II.—52 years old; has two children; youngest 23 years old; up to within few months menstruation regular and painless; for a month had had a slight, but continuous bloody discharge; for years the vagina said to have been shallow, but recent examination showed puckering and apparent closure of upper portion; vagina ended in blind pouch, about an inch below the cervix, a small probe, however, passed through a sinus into cavity about cervix; this was slit laterally with tenotomy knife, then widely dilated; a lacerated cervix, the tear extending down into the vaginal wall on either side showed origin of the stenosis; opening was packed with iodoform gauze; recovery complete, rapid and painless.

These patients should have had more careful attention at their confinements. At least, if a vaginal examination had been made before their final

discharge, the conditions would have been seen and remedied, or prevented.

Dr. E. W. CUSHING reported a case. Mrs. M., 25 years old, entered the Charity Club Hospital in the following condition: There was complete rupture of the perineum, extending two inches into rectum; there was a large opening in base of bladder, and vagina was apparently perfectly obliterated; this condition was result of labor three months before in another city; delivery effected with forceps with great difficulty. At a first operation repaired perineum and vesicovaginal fistula; at a second operation opened the vaginal passage as much as seemed safe; reached cervix with opening sufficient to allow finger to pass, and packed with iodoform gauze; packing continued for some weeks, then third operation completed the work by separating dense adhesions all around the cervix and restoring the caliber of the vagina.

Became pregnant not long after, and was delivered at the Boston Lying-in Hospital.

Eleventh International Medical Congress.

A LETTER, directed to the undersigned by the Secretary-General of the Eleventh International Medical Congress, and dated December 19, 1893, contains the following communications:

American members will pay on the English, French, and Italian railways single fares for double journeys, and will obtain a reduction of 20 per cent. on fares for Italian round-trip tickets.

The documents required for their identification will be sent to you in January, and Americans intending to visit the Congress will have to apply to you for them.

Full particulars concerning the journeys will accompany the documents.

Messrs. Thos. Cook & Son, London, Paris, Rome, and Naples, should be applied to for accommodation and for tickets for the excursions at Rome, Naples, and to Sicily. Such excursions will be arranged at Rome, under the guidance of Mr. Forbes, member of several scientific societies and correspondent of the *Times*,—for Naples, three days, including Vesuvius, Pompeii, Capri, Sorrento, Castellámare, Bajae, etc.; for Sicily, ten days from Naples, including Messina, Taormina, Catania, Girgenti, Siracusa, Palermo, and return to Naples.

The fares for members of the Congress will be considerably reduced, and comprise hotel accommodations,

carriages, guides, boats, etc.,—about 70 francs each for the three days, and 285 francs for the ten days.

Full particulars concerning these excursions will be contained in a leaflet to be added to the instructions and documents for the journey.

From former communications the following are herewith quoted: The members' fee is \$5.00, that of their wives or adult relations \$2.00 each. Checks or money orders may be sent to Professor L. Pagliani, Rome, Italy. Credentials have been promised in the near future. When they arrive (none were received last year), they may be too late for many who have started or are about to start. The undersigned, who is not informed of the cause of delay, proposes to supply in as official a form as he thinks he is justified in doing, credentials which are expected to be of some practical value. The North German Lloyd has promised to recognize them. It is suggested, besides, that a passport may increase the traveller's facilities.

Only the North German Lloyd (22 Bowling Green) and the Compagnie Générale Transatlantique (3 Bowling Green) have thought fit to grant any reductions to Congressists.

The reduction on Italian railways are available from March 1 to April 30.

A. JACOBI, M.D.,
110 W. 34th Street, New York.

ABSTRACTS FROM CURRENT LITERATURE.

BY CHARLES G. CUMSTON, M.D.,

BOSTON, MASS.

Treatment of Fibroma of the Uterus by Electricity.

At the seventh French Surgical Congress, held in April, 1893, Drs. Bergonié and Boursier, of Bordeaux (*Bull. Gén. de Thérapeutique*, June 30, 1893), read a paper on the above-named subject, based on over two hundred cases, but the authors eliminated about one hundred of them, because the length of time that had elapsed since the treatment had ceased was not sufficiently long to be of value as to the final result.

The treatment was only employed for pure fibroma and myoma of the uterus.

The method of applying the electricity was as follows: To the positive pole was attached a sound of carbon, which was introduced into the cavity of the uterus, while a large, indifferent, abdominal electrode connected with the negative pole was placed on the abdomen. The intensity of the

current varied from 25 to 150 milliam-pères, and the duration of each séance was about ten minutes. The following results are based on 100 cases which were exactly alike as to diagnosis and treatment. Of these 100 cases, 64 were voluminous fibroma, and of these, 7 were reduced in size, 90 were fibroma with hæmorrhages, and 81 of these cases were relieved or ameliorated of these symptoms; 41 cases had pain, of which 22 were improved or cured by the treatment, and, lastly, in 65 cases, the poor general condition of the patient was improved.

The conclusions are that this method of treatment is especially efficacious in cases of hæmorrhagic fibroma, acting favorably on the general condition and on the pain; and lastly, it has rarely reduced the size of the tumor.

Suppurated Salpingitis cured by One Vaginal Puncture.

This was the title of a paper read by Dr. Delegrange (*Nouvelles Archives d'obstétrique et de Gynécologie*, November, 1893) at the March meeting of the Anatomo-Clinic Society of Lille. The patient was a strong, unmarried nullipara, aged 27; had never

had venereal disease of any kind; her menstruation had been normal until about three years ago. The abdomen was not increased in size, but palpation revealed just above the pubis a deeply-situated tumor which reached several finger-breadths to this bone.

This tumor was painful on pressure, and appeared to be quite hard. Percussion was negative. Vaginal examination gave the following: The cervix was conic, small, and situated just behind the pubis; just beyond the vulva the hand came upon a mass, which not only filled the posterior vaginal cul-de-sac, but appeared to be enclosed in the lower pelvis; by bimanual palpation it was found that the tumor extended on both sides towards the broad ligaments, especially on the right, and connected with the mass felt behind the pubis, making its size about that of a fœtus at

term; the tumor was hard to the feel, not so much, however, as a fibroma. To make a sure diagnosis, an aseptic aspiration was made with Potain's instrument, and a litre of pus was withdrawn. Palpation and vaginal examination showed that the tumor had disappeared, but the uterus seemed immovable, deviated slightly to the left; there was also a hard tissue in the posterior cul-de-sac, probably the walls of the pus-cavity. The patient made a good recovery, and was heard from three months later as being perfectly strong and well.

Treatment of Chronic Cervical Endometritis in Nullipara.

At a meeting in February, 1893, of the Surgical Society of Paris, Dr. BOUILLY spoke on this subject. The author wished that it be understood that he only was speaking of chronic endometritis as met with in young women who had never had children, and, consequently, had neither tear nor sclero-hystic degeneration of the uterus. In these subjects the cavity of the cervix is narrow, and the secretions are retained. Women who have sticky, viscous discharges are sterile, but suffer little, having only a feeling of weight in the pelvis. The author thought that perhaps gonorrhœa was the cause. As curetting the uterus and topical applications always fail, and as Schroeder's operation is too complicated for so small a lesion, the author proposes the following operation: He commences by dilating the uterus for two days, after which he washes out the cavity and cures the uterine cavity, the upper and lower

lip of the organ are fixed by forceps, and the operation proper is commenced. With a long narrow-bladed bistoury a flap two, three, or four millimetres thick, according to the thickness of the tissue, is removed from the demi-circumference of each lip. The mucus is thus abraded so as to form two excavations with their cavity opposed to each other; the mucus on the sides of the cervix is carefully preserved, as it is necessary for the regeneration of this tissue. The external orifice is widely opened, and the cavity of the cervix is stuffed with iodoform gauze. The author has performed this operation forty times with only one failure, and twice conception has taken place in women who had been sterile for a long time. As little hæmorrhages have taken place after operation was completed, the packing with the gauze should be carefully done.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of February 1, 1894.

THE VICE-PRESIDENT, DR. W. E. ASHTON, IN THE CHAIR.

DR. J. G. KERR, of Canton, China, at the invitation of the Society, made some remarks on—

OBSTETRICS AND GYNÆCOLOGY IN CHINA. (See page 326.)

Mr. President and Gentlemen: I did not come here expecting to make any lengthy address. It, however, gives me pleasure to meet this Society this evening and give some little account of our work in the empire of China. As you probably are all aware, the physicians of China are not at all educated. There is properly no medical profession there as in this country. There are no medical schools, no system of education, and no medical examinations, while in literature the examinations are very thorough, and have been conducted for many centuries. These examinations have been regarded with admiration by all travelers and those who have investigated the history of literature in China. Practitioners of medicine are very numerous. They have a medical literature, they read the medical books, and study with those who are engaged in practice. Very commonly physicians educate their sons, and it is quite common for each physician to have a number of remedies which are favorites with him, and which are usually secret remedies. These are passed down from one generation to another. The education of those who practise medicine in China is very limited as compared with the education of medical men in this country. They know nothing of anatomy, they know nothing of physiology, they know nothing of chemistry, they do know something of materia medica, and have a system of practice which is given in their books. The only work on native obstetrics that I know of is a little volume of forty or fifty pages, which I translated into English many years ago and sent to this

country, but it was not published. The paper fell into the hands of Dr. Robert P. Harris, who has written it out in very nice style, and it is now in the Library of the College of Physicians. This book was prepared for the instruction of midwives, as all the practice of obstetrics is in the hands of women, who, of course, have no education.

It might give you an idea of the condition of practice in this line if you can imagine that all of the physicians in Philadelphia were entirely ignorant of everything that they know about obstetrics, anatomy, physiology, and instrumental work, or imagine that there was no physician in the United States capable of taking charge of any case, either simple or complicated, you would then have some idea of the condition of affairs in China. In no case is a male physician called in to give aid in a case of difficult delivery. They are sometimes called in to examine the pulse or prescribe medicine, but they know nothing of any method to give relief, or to assist nature, or of doing anything in the way of relieving the troubles which occur in difficult parturition. This being the case, it is quite natural to suppose that there are a great many cases where there is much suffering—protracted suffering—and even death.

Many years ago, when I first went to China, it was a thing almost unknown to call in a foreign physician, although foreign physicians had been practising for twenty years in Canton before my arrival, but so far as I know they were never called into any case of difficult delivery. After I had been there for some years I was called occasionally to see patients in the last extremity, when death was imminent. Two or three such cases occurred in a year. When called to these cases, even when there was no possible hope of saving life, it was my custom to deliver the child, if possible, with instruments, merely for the

purpose of showing that we had a method of giving relief in these cases. In the course of years the number of cases to which I was called became more numerous. Some ten years ago we had a lady physician associated with us in our hospital work. She had charge of the female wards, and was occasionally called to these cases. When I was called I either took her with me or she went herself. In the course of time she was more and more frequently called to see these cases. Her report, I think, for 1892 gives 100 cases to which she was called. Of this number five were already dead on her arrival, and of the remaining number, fifty required surgical interference. The remainder were delivered without instrumental interference.

It has been supposed that the Chinese, being a semi-barbarous people and physically strong, did not furnish many cases in which there was trouble in childbirth, but now that we are coming in contact with the people, and the lady physicians are being called in, we find that there are a great many cases that need assistance at this critical period. If you take the statistics of this one year with 100 cases, fifty of which required instrumental interference, and take this as the proportion that would occur throughout the province, you would have hundreds of cases, and if you extended the statistics to the empire you will have thousands on thousands of cases requiring this interference. Take the five cases in 100 dead, before the arrival of the physician, as an index of the number of cases that die yearly,—that is, five in one year in a city of a million and a half population,—you would have in ten years fifty deaths. If you extend these statistics to the province containing 19,000,000, or to the whole empire with 350,000,000 or 400,000,000, what a vast multitude of people come to an untimely end because of the ignorance of those who have charge of them at the period of delivery! This will give you some idea of the condition of the people in this vast empire, but these statistics are far below the truth. In the work of the fifty or sixty missionary hospitals we are endeavoring to correct this state of affairs not only by the treatment of the cases with which we are called to deal, but by giving instructions to male and female students, and by extending the knowledge which we possess by the translation of books. We have already translated books in all of the depart-

ments of medicine, so that now we are able to take a class of students through a course of instruction to some extent similar to the instruction given in this country. Of course we are not prepared to give the thorough and complete instruction that students receive in this country, but we are laying the foundation for a system of medical education, and laying the foundation for medical schools which, in the course of time—half a century or a century—will develop into institutions such as you have in this country.

I might give a few instances of cases coming under my own observation, showing the conditions under which we are called to practise. In the cases to which I was called a few years ago I usually found the child in a state of mortification and the mother in the last extremity. In one case the body had been removed and the head left in the uterus. The skull had by some means been broken up, so that it was soft and pulpy, and the forceps would not hold, and I was under the necessity of removing it with the hook. Three or four years ago one of our missionaries with his sister, who was a physician, were attempting to establish themselves in the interior of the country, three or four hundred miles from Canton. On one occasion while I was there this lady physician, who had been educated at the Woman's Hospital in this city, was called to see a woman in labor a short distance from the house. I shall never forget the account given by this lady physician, who had just come from this country with her ideas of what it was necessary to do and the care that should be exercised in cases of this kind. She found in the house with the patient the cows and the pigs and the dogs and the cats and the other animals which belonged on the farm. This was in summer, and around the walls of the house hung bundles of winter clothing. The floor was the ground, and the bed was in anything but a sanitary condition. This lady doctor, returning from the operation, expressed the astonishment with which she witnessed this case of delivery, and her mind ran over the lessons she had received in the Woman's Hospital in this city. In this case both the mother and the child did well.

We have not had the opportunity to perform many of the operations that are so common in this country, the modern operations which give so much relief in female

diseases. There have been some operations of ovariectomy. I think that there has not been a successful operation for urinary fistula. We have had no operation for the removal of pus-tubes or anything of that kind. All of that department of surgery remains to be developed.

In order to perform these operations successfully requires some special preparation. When I first went to China the work was in my own hands. I had no assistants except those who had been trained in connection with the hospital. Now that medical missionaries and lady physicians are becoming more numerous, I hope that these departments of surgery will be rapidly developed and that a great deal of good will be done by the practice of these operations which give such wonderful results in this country.

I do not recall anything else that would be of interest to the members, but if there are any questions to be asked, I shall be glad to give what information I can.

DR. JOSEPH PRICE :

It is interesting to know what has been neglected and what has been attempted in China. It would also be of interest to know if any operations have been undertaken for the repair of the sequela of neglected parturition. The doctor has alluded to vesicovaginal fistula. We should be glad to know if operations have been done for the repair of lacerated perineum and fistula. Also whether Cæsarean section has been resorted to.

DR. G. BETTON MASSEY :

It would be interesting to know the habits of the women of China in regard to abortion. Also whether or not cancer of the breast or uterus is prevalent.

Are hysterical manifestations of common occurrence? Of course I recognize the practical difficulties in answering such queries, but Dr. Kerr may be able to throw some light on them.

DR. ROBERT P. HARRIS

Asked if the book to which Dr. Kerr referred was still circulated in China. Many years ago the translation which Dr. Kerr made fell into my hands and I reproduced it in book form, so that it could be kept, and added some drawings illustrating the ideal

anatomy of the Chinese. I could get no one to publish the translation of the "Tat Shang Pin," and I deposited the book in the Lewis Library of the College of Physicians. The Chinese ideas of obstetrics are very curious. They think that the difficulties in labor arise from interference with the fetus. They suppose that the child sits on the brim of the pelvis and when the proper time comes turns a somersault, and if there is no interference, comes into the world of itself without trouble. With this idea of obstetrics, it is not surprising that they have difficult labors. The title of this book in English is "Midwifery made Easy."

DR. KERR :

In reply to Dr. Price, I would say that the opportunity to perform plastic operations on the perineum are very rare. A male physician would hardly ever be permitted to make the examinations necessary to determine the existence of such injuries. The natives themselves, of course, practise no operation for the relief of injuries received in difficult labor. There has, I think, been but one Cæsarean operation in Canton, and that has been performed since my return to this country. This was done by my assistant, Dr. Schwann. I know of no operation done for laceration of the perineum or of the cervix. Now that lady physicians are there, women will submit to examination by them, and these operations will gradually be introduced. As I have said before, it is only in extreme cases where death is threatened that they will call in a male physician. Prior to the arrival of the lady physician, some ten years ago, I had met with a few cases of stone in the bladder of the female, and had operated on perhaps eight or ten cases. I have met with other cases where the symptoms indicated the presence of stone, but the women would not submit to examination to find out the real character or cause of the difficulty. The Chinese females are particularly modest. That is one of the characteristics which we admire in the Chinese women. This arises from the fact that they are in a measure kept secluded from society. When a party of gentlemen meet at the house of a friend, the female members of the family are never present at the feast or entertainment, so that the habits and customs of the people tend to make the women very careful in their association with the men.

Criminal abortions are not very common, because it is easy to dispose of the child after birth. It is a common thing to expose children in the streets, and there is an asylum for infants, where a great many female children are taken. A male child is never made away with, or at least very rarely.

Cancer is quite frequent. I have met with a good many cases of cancer of the breast. Cancer of the uterus has not been observed very frequently. I occasionally meet with cancer of the rectum. We do not hear of cases of cancer of the uterus, because these patients do not come to the hospital for the relief of diseases which they have not heard can be cured. Certain hospitals in different parts of the country become known as places where particular diseases are relieved. This matter was brought out at a meeting held in Shanghai two or three years ago. I was at first surprised to find that certain diseases were met with more frequently in certain hospitals than in others. It was because the hospital got the reputation of being able to relieve this particular affection. When we establish a reputation for the treatment of the various diseases that have been mentioned, then the fact that these diseases exist will become known.

Prostitution is quite common, and there are many prostitutes. It is a business to buy girls and train them up for this purpose. It is a system of slavery practised there. I suppose that nine out of ten sent to the foundling house which I have mentioned are sold to be brought up as prostitutes.

Illegitimacy, as we understand it, is uncommon. This is owing to the practice of polygamy, and to the fact that early marriages are so common and prostitutes so numerous. The cases where a wife is unfaithful or a daughter brings disgrace on her family in this way is very rare, and when such things occur, they excite a good deal of interest in the community. In such cases the woman is turned out of the family and often killed. In China, the head of the family has the power of life and death over members of the family. If the husband chooses to kill his wife, nothing would be said about it.

Specific disease is very common, and we see a great many cases in all stages.

The book on obstetrics to which I referred is, so far as I know, the only native work on obstetrics. It is circulated gratuitously as a

matter of merit on the part of those who take this method of doing good. As has been stated, the idea given in this book is that the foetus sits upright, and when labor begins, it turns around of its own accord and makes its exit by a voluntary process. I have seen cases where the midwife has sat calling on the child to come forth.

THE TREATMENT OF THE PEDICLE IN
HYSTERECTOMY. BY R. S. SUTTON,
M.D. (See page 341.) Read by
J. M. BALDY, M.D.

DISCUSSION.

DR. E. W. CUSHING, Boston (by invitation):

The subject of the treatment of fibroids is an interesting one to me, especially as my way of operating has often brought down upon me the oburgation of my friend, Dr. Price, inasmuch as I never use the wire. In my first case I had no wire. I started to find an ovarian tumor. I found a double ovarian tumor so adherent to the uterus that the latter organ had to be removed. I constricted the stump with a rubber tube with hat-pins to secure it, and this served admirably, and from that time forward I have used the rubber ligature, and I cannot understand why it is so common a thing in Philadelphia to use the wire.

I shall first speak of the extraperitoneal method which, although largely rejected in Philadelphia, I presume is still used to a certain extent. In reducing the size of the stump where there are fibroid masses near the cervix, the rubber ligature is an immense convenience. It is elastic, and one can readily slip the finger under it. If the broad ligament is too tense or the bladder is included, the tissue can be drawn out. This cannot be done with the wire. I consider the rubber ligature as the best in the extraperitoneal treatment of the stump. The main thing is to not allow it to slip down. It should be so fixed that it lies as far as possible on the surface of the skin. One pin or both should be below it.

With regard to the intraperitoneal treatment, I echo the last remark of Dr. Sutton's, that it is not a method for amateurs. Whether it is best to remove the whole cervix or to leave part of it is something in which I am inter-

ested. In my first eight or nine cases I left the cervix and burned out the cervical canal, and they all got well. Then I had three die where the cervix had not been cauterized. I could not tell the reason, but I am inclined to think that I left too much cervix. What Dr. Sutton said about the stump standing up in the peritoneal cavity reminds me of this point, that if you are going to leave some cervix, do not leave a large portion with the uterine arteries tied, for there is danger of sloughing from defective nutrition. However, if a man has detached the bladder and got down to a point where he will leave only one inch of cervix, it is a simple matter to go on and remove the remainder. I have recently had a case which has convinced me of the advisability of removing the whole uterus. In this case I left a stump, and the woman made an excellent recovery, but in three months malignant disease appeared, the abdomen filled with fluid, and masses were found in the pelvis apparently connected with the end of the stump. What I thought was a fibroid was probably more or less sarcomatous. In total extirpation, it seems to me that the plan of Polk of drawing the four ligatures down into the vagina is the ideal method. It, however, takes time, and this is the objection to the removal of the whole uterus. Where the abdominal wall is not too thick, and especially where the pedicle is long enough and where the patient is not very strong, it is, in my judgment, in many cases desirable to use the extraperitoneal method, because in my hands it will save half an hour in time, and possibly more, and time is the essence of success in abdominal work. Where the abdominal wall is thick and the patient is strong, and there is no reason for being in a special hurry, total extirpation makes the more finished operation.

DR. CHARLES P. NOBLE :

I have listened with interest to the paper of Dr. Sutton, and to the remarks of Dr. Cushing. From my stand-point the use of either the rubber ligature or the wire *serre-nœud* is unnecessary and has been superseded. I have used both the wire and the rubber ligature, but I do not see much choice in one over the other.

From the stand-point of time, I do not see that there is any choice between the *nœud*

and removal of the uterus down to the vagina. If it is an easy case, the ligation of the broad ligaments requires but a few minutes, and it is only in easy cases that the clamp can be used rapidly. If you have "to make a pedicle" by the extraperitoneal method, a good deal of time is consumed. From the stand-point of time, I believe that one can do the operation without the rubber ligature or *nœud* as rapidly as with it.

So far as the recovery of the patient is concerned, I have been especially happy in my experience in the treatment of fibroid tumors. I never operated on such a case that did not recover, whether I removed the tumor by the vagina, or used the *nœud* or ligature, or did a total extirpation, or followed a method similar to that of Dr. Baer, or removed the ovaries.

From the stand-point of prognosis, so far as my own results have been concerned, there has been no preference. So far as prognosis is concerned, in the hands of those who make use of these various methods, the experience of the last two years shows that honors are easy. The method in which a portion of the cervix is left will show the best mortality. The method of taking out the entire uterus certainly takes longer than to amputate at or below the line of the internal os. I have only twice removed the entire uterus. I have amputated at the level of the vagina several times, and have made up my mind that I can do the latter operation more quickly than pan-hysterectomy; and have come to the conclusion that in my hands it is the best operation. I fail to see why it is not applicable to every case. The reason that it is applicable is that in every case you finally come down to the same structure,—namely, the cervix uteri.

The point made by Dr. Cushing is a good one, that if you are going to leave any portion of the cervix, it should be a small part. It is perfectly simple when you have tied almost to the vagina to put the last ligature at the vagina. In that way we tie every vessel entering the cervical tissue. There is then no necessity for putting sutures in the cervix. I think that the point which has been insisted upon by Dr. Baer is one of the greatest importance in hysterectomy,—that is, that the hæmorrhage be controlled by ligature in the compressible tissues of the broad ligament. If the surgeon will arrest hæmor-

rhage in that way instead of using *nauuds*, rubber ligatures, or ligatures in the cervix, the results will improve. That is the secret of the bad results which Schroeder and those who have followed him have had. They depended on ligatures in the cervix instead of in the broad ligament to control hæmorrhage.

With reference to the word intraperitoneal, I have spoken about that before. I wish to insist that this operation is just as much extraperitoneal as in the operation with the *nauud*. We tie the broad ligaments and amputate the cervix at the level of the vagina and cover the wounded broad ligaments, and suture over the cervix flaps of peritoneum taken from the bladder and from behind the uterus. In the course of twenty-four or thirty-six hours the line of suture across the pelvis unites and the little piece of cervix is left extraperitoneal. When the stump is drawn into the abdominal wound, the parietal peritoneum is sutured to the peritoneum on the stump below the wire. The stump is made extraperitoneal only by the union of the layers of peritoneum thus brought together. Hence I believe that one operation is as much extraperitoneal as the other.

DR. B. F. BAER :

I would agree with Dr. Sutton thoroughly if he had said that hereafter he would perform all his hysterectomies by the method used in the case reported to-night, which is the method which I have introduced. I believe that in almost every case, if not in every case, this method is the best. This statement is based upon an experience of more than fifty cases in which there has not been a single refusal on my part to operate, taking the cases as they come, the simple with the complicated. There were two deaths. These have been recorded, and I think that those who have read the reports will agree that the deaths had nothing to do with the method. One patient died from suppression of urine, the result of unrecognized kidney-disease. I think that I am justified in saying that the mortality from this method, as a method, should not be anything. Dr. Noble has given a clear expression of the steps in the operation in his remarks and I have described it over and over again, so that all should be familiar with it.

I think that Dr. Cushing's deaths must

have been due, as he says, to the fact that too much cervix was left in the abdominal cavity. The cervix should be left just as nature placed it, under the peritoneum, absolutely untouched. The cervical canal and the cervical tissue should not be pierced by a ligature. All of the supravaginal cervix is removed flush with the vaginal attachment. Then the peritoneal folds fall in and cover over the tissues, usually without extra sutures. If they do not remain in close coaptation sutures must be applied. In the majority of cases I place but one suture directly over the centre of the internal os. Nothing is done to the cervical canal. The more you interfere by dilatation and cauterizing or closing it unnaturally, the more you violate the natural condition. By this method the convalescence is shorter and the patient is more comfortable than after the operation with the *nauud*.

I have traced many of my cases and have examined the condition of the cervix many months after the operation, and the cervix has invariably been found healthy. Where malignancy is suspected, total extirpation should be adopted. Where malignant disease does not exist and the cervix appears normal, I believe the supravaginal method to be the better. Total extirpation weakens the floor of the abdomen and leaves a puckered and hardened condition at the upper end of the vagina which is of decided disadvantage in a married woman.

DR. JOSEPH PRICE :

With reference to the mortality of the different procedures mentioned, I agree with the previous speakers that whether the operation be supravaginal extraperitoneal, or supravaginal intraperitoneal, or total extirpation, the mortality should be *nil* if the patient is in a condition to bear any operation. We have perfect results in double ovariectomy, and we should have them in intraperitoneal extirpation of the uterus in which we have pedicles on each side, as in double ovariectomy, and in that fact I would take exception to what Dr. Noble said about the operation being an extraperitoneal one. The stump may be bridged over by peritoneum, but leaving the two pedicles on the sides makes the operation an intraperitoneal one, and until this is overcome the operation remains an intraperitoneal one.

Comparing the clamp and rubber ligature. The use of the ligature is rapid and safe, provided the ligature can be depended upon, and provided the operator knows how to place it. Dr. Cushing calls attention to the fact that the ligature may slip down, and that the bladder and broad ligament must be looked after. That would be dangerous in the hands of a beginner who does not recognize the broad ligament and the bladder. If he will use hæmostatics as bench-marks, and place them before applying the ligature, he will distance the danger. It matters not whether you take one procedure or another, you must work by bench-marks. I admit that the ligature is safe, and that the results have been most excellent. A few weeks ago, while in Alabama, a country physician said to me, "I have recently had an interesting case, and I presume that you will criticise my heroic treatment." The case was one of extrauterine pregnancy at term, in labor for a week, in the hands of a midwife. The physician was then called and found the abdomen greatly distended and the woman dying of peritonitis, with a pulse of 120 to 130. The diagnosis was between ruptured uterus and extrauterine pregnancy at term. He did a section and found an extrauterine pregnancy with the fœtus in the abdomen. He removed it and attempted to remove the placenta which was attached to the uterus. The hæmorrhage was enormous, and he at once decided to do a supravaginal hysterectomy. He passed a hair-pin through the uterus, and surrounded the cervix with a rubber ligature, and cut everything away, irrigated and drained, and the patient recovered. This case of supravaginal extraperitoneal hysterectomy for extrauterine pregnancy at term is probably unique. This was done by Dr. —, whose name I have forgotten, of Opelika, Alabama.

I believe that we shall finally come to extirpation clean and complete. While I cling to the clamp method, and while my results are about perfect, I shall continue to do it, yet every now and then I do a clean extirpation. Two patients have recently gone home after a clean extirpation. Complete extirpation is one of the speediest operations that you can do. I pull the uterus up over the pubic arch, and make a vertical incision into the vagina posteriorly, and then carry it around to the bladder on each side.

The clamp method, however, is safe; it is sure, and the results in the hands of the beginner have been better than by any other method. Dr. Cordier, of Kansas City, has done ten consecutive extraperitoneal operations without a death. That is good for a beginner. I cannot recall a single death by any single operator here present by the clamp method. The mortality has unquestionably been lower by the extraperitoneal supravaginal method. That was so in Keith's hands. While he was one of the most refined operators, he clung to the clamp, and insisted that he had a less mortality. I am not prepared to say that his method was the best. It took Dr. Bantock many years to learn how to do his operation. He lost his pedicle in the thirty-first operation, because he had not learned the importance of placing the pins before cutting away the tumor. Then he laid down the law to place the pins before cutting away the tumor. One can scarcely understand how he could do thirty one operations without learning the importance of this point.

DR. M. PRICE:

An operation to be appreciated should be in the hands of its friends. As Dr. Cushing, Dr. Noble, and Dr. Baer are friends of the intraperitoneal method, I wish to call attention to two or three things. Dr. Cushing states that with the wire it is impossible to pull down the broad ligament as with the rubber ligature. The pedicle must be made before the wire is applied. If you are going to make a pedicle, it must be ready before the wire is applied. The broad ligaments are often severed between forceps before the wire is tightened at all. The operation is completed, so far as the pedicle is concerned, when the pins are placed and the wire tightened.

In discussing this subject recently, one of the gentlemen stated that he never did an extraperitoneal operation without having a hernia follow. That would at once show that he does not know how to do the extraperitoneal operation. Hernia should not follow in more than one case in twenty-five, in the hands of one who knows how to do the extraperitoneal operation. The extraperitoneal method protects the abdomen from all ligatures. We have not a single ligature left in the peritoneal cavity, unless it be on the intestine or omentum.

As to the safety of the method, I do not believe that there should be a single death, unless it is the result of an oversight, or due to something wrong before operation, as disease of the kidney or some other organ which has not been recognized, or there has been a congested condition of the kidneys from the ether, or from some other cause. Yet with all these accidents that may occur, I have not seen a single death from hysterectomy in two years. We have four or five of these cases in the house at the present time. The temperature and pulse have been normal from the beginning. While we can have a *nil* mortality, and go on month after month with perfect assurance that the woman will have no increase of pulse or temperature, and return to her home safe and sound, and, taking it for granted that we have a hernia in one in twenty-five cases, and that we operate on every single hernia within the year, and have a mortality of two or three per cent. in the hernia operations, the mortality even then will not be so high as after the intraperitoneal method.

DR. J. M. BALDY:

As to the choice between the wire and rubber ligature and the intraperitoneal treatment of the stump. In all my cases by the extraperitoneal method, I found no difficulty in getting the bladder from under the wire *wound*. If there is any doubt, I loosen the *wound* and push the bladder down. If there should be any tissue included that should not be, the clamp can be loosened at any stage and the tissue pushed down.

As regards the results in the so-called intraperitoneal method. Since last May there have been, among a large amount of other work, thirty or forty hysterectomies at the Gynæcean Hospital and there has not been a death in the house from any cause in that time. Dropping of the pedicle is as safe as any major operation can be. It is absurd to say that any major operation is perfectly safe. We cannot go back to Keith's time and compare his statistics with those at the present day. Keith did not know anything about hysterectomy from our present stand-point.

As to complete extirpation, I congratulate Dr. Price on having abandoned his old position and come into the camp of scientific methods, that of complete extirpation or am-

putation. I prophesied six months ago that every member of this Society would accept these views. I offer my congratulations to Dr. Price, the last advocate of the clamp method, for having, however tardily, found the proper scientific side of the subject. The complete extirpation is practically nothing but the Freund method; it does not belong to Polk. If any one in this country can claim credit for advancing its principle, it is Krug.

Dr. Baer states that the stump should not be touched after amputation is made. If you do not, there is a chance that germs may reach the clean surface through the cervical canal. After wiping out the cervix with the cautery or bichloride solution, I close it by a circular suture and whip over the peritoneum so that there is no chance for infection.

With regard to Dr. Price's objection that this is not an extraperitoneal operation, because we leave lateral stumps; if desired, it is very simple to take the loose folds of peritoneum on each side of the stump and draw it over the raw surface, thus making a complete line of suture from one side to the other. I do not consider this necessary, although I have done it a number of times.

As regards time, amputation is a shorter operation than extirpation; not only is it shorter, but it opens a smaller hole through which sepsis can come. In total extirpation you have a larger wound and more connective tissue exposed, which may become infected. After amputation you have a small opening (the cervical canal) which you can control perfectly, and there is the minimum amount of danger of sepsis. If, however, malignancy is suspected, it is necessary to do complete extirpation. If complete extirpation is to be performed, I consider it a faulty method to draw the stump down into the vagina and leave the ligatures long. The peritoneum should be closed so that there shall be no raw surfaces to be followed by sloughs. That is the fault in vaginal hysterectomies. There is no vaginal hysterectomy done by any method that does not leave a raw surface and a surface to slough. The ideal surgical method is to have nothing to come away subsequently and to have a completely closed wound.

I think that there is no operation that will ever stand in competition with amputation except in those cases where there should be complete removal on account of suspected

malignancy, and this should be known before operation. The mere fact that malignancy has occurred subsequently is no contra-indication to amputation. It means simply that the operator was at fault in his diagnosis or that malignancy was there, but could not be determined at the time.

DR. G. BETTON MASSEY :

I think that this Society will have much to answer for if it continues to claim that hysterectomy is an operation with a *nil* mortality, as has been asserted several times to-night. There are others in the world who listen with much pleasure to what is said here and are extremely likely to be guided thereby. If the mortality is *nil*, as is claimed, why devise these new methods or changes in operation? If they can operate in one hundred cases with one hundred successes, why change the method? If this is so, why was the resolution which I offered to this body a short time ago not seconded? This resolution was directed towards obtaining the statistics of this operation in the hospitals of Philadelphia. I offered that resolution because I wanted light upon the subject. I do know that there are hospitals with a different record, and that there are operators who have operated on consecutive cases of fibroid tumor with a consecutive series of deaths. I hear of such statistics as eight deaths in fifteen operations, of five deaths in nine operations, and so on, but I do not hear them here. I really plead for more light and for more exact statistics upon this subject.

I wish also to allude to the removal of some of these growths by morcellment. I am convinced that in certain forms of cystic and other submucous growths this method can be assisted by very strong positive galvanic applications at the site of operation, which may be conducted in several sittings by the employment of continuous irrigation on a rubber pad. I shall have the pleasure of soon reporting such a case, where piecemeal extraction was practised, extending over a considerable time, permitting the uterus to contract over a vascular, cystic, trabecular growth in the interior of the uterus, where the use of the knife or scissors threatened death from hæmorrhage. The operation was made possible by the use of strong currents which sealed up the uterus against

both hæmorrhage and septic absorption. The danger of sepsis was avoided by the continuous irrigation, which was maintained for some months.

DR. M. PRICE :

Dr. Baldy states that since September he has had thirty or forty or fifty hysterectomies, without a death. Within the last three or four weeks he has reported eighty-one cases, with seven deaths. In his first twenty cases he reported two deaths, in his first twenty-nine, one death. Therefore, in his last fifty-one cases, he has had six deaths, a rather large mortality; no comparison with Keith, whom he has criticised. I wish to say in regard to Mr. Keith, that he was a pioneer in hysterectomy, taking the operation up in his age, showing a surgical power and a surgical courage which has been an example to the world, and his work has been our warrant for anything that we have done. If Mr. Keith could get the electrical idea out of his head, he would to-day lay us all out in hysterectomy.

DR. JOSEPH PRICE :

I think that the records of this Society will show that I did the first clean extirpation done in this city, assisted by Dr. Parish. I have since continued to do complete extirpation. I shall continue to do extraperitoneal supravaginal hysterectomy. When we remove a healthy tumor from a healthy abdominal cavity, and place a healthy peritoneal collar about the pedicle, we expect the patient to get well. I have done 122 hysterectomies, with six deaths. Four of the six were malignant and hopeless, one pyæmic and dying before the operation, the sixth due to an accident.

With regard to Mr. Keith, no greater surgeon in peritoneal work ever lived. He was the embodiment of all that is refined and skilful in intraperitoneal work. He was not only the pioneer, but the educator of the world in hysterectomy. The forty-two fibroids removed by Keith, with a mortality of three, would weigh more than all the fibroids removed in Philadelphia in one year. These were all cases of enormous tumors where the operation had been greatly delayed, and dropsical and a variety of unfavorable symptoms were present. If these cases had been oper-

ated on in Philadelphia, the mortality would have been 40 per cent. instead of 6.

With regard to the specimen, it is in tumors of this kind that we have accidents to the bladder and ureters. If we have a fixed bladder between these tumors, we are liable to have accidents to the bladder or ureter. We may have a small tumor lifting the broad ligament with the ureter on top. In a recent case I laid bare the ureter for fourteen inches, and after delivering the tumor, I took the capsule and stitched it over the ureter for fourteen inches, to give it a peritoneal covering and support.

Early in the growth of fibroids, pelvic peritonitis fixes the ureters on the tumor; tubal and ovarian suppuration results in fixation of the ureters.

Multinodular fibroids are very commonly complicated by tubal and ovarian disease.

DR. E. W. CUSHING :

I think that what I said in regard to the rubber ligature has been a little misunderstood. There seems to be a fear that the rubber may break. If you take a thick ligature and draw it with force, it might break; but if you take a thinner ligature and carry it around several times, you get a tremendous pressure, as the ligature re-enforces itself. I have seen in the hospital of a distinguished operator in Philadelphia the wire break, if I am not mistaken, three times. The ureters were under the wire, and the patient died.

I have reported fifty cases, with ten deaths. These were my first cases. We do not hear such reports from Philadelphia.

I do not mean that the ligature may slip down on the bladder, but we can slip our finger under the ligature and shell out the tumors and put the pins where we want them and regulate the application better than with the wire.

DR. J. M. BALDY :

I do not mean to detract from the credit that belongs to Mr. Keith for his work in the past, but I do protest against his statistics being compared with those of the present day. As far as large fibroids are concerned, there is no easier operation than the removal of a large fibroid. They are never complicated and never intraligamentary. The pedicle is always small and easily dealt with. If one wishes to do a slow operation, a case with a large fibroid is always a safe one to pick; the larger the more certain is it to be easy. The removal of small fibroids is the hardest; the operation is more difficult, and requires more time and skill.

With regard to the hysterectomies at the Gynæcean Hospital: My paper reporting seventy-seven cases was read before the Pan-American Congress in September. The whole winter has passed since then. The eighty-one cases alluded to were referred to at a later date in another paper when the number had increased to that point. I am not at present the only surgeon operating in the Gynæcean Hospital, and the statement that there have been thirty or forty cases there without a death since last May, although merely an off-hand estimate and not pretending to be strictly accurate, is not by any means an exaggerated statement, either as to numbers or results, as seems to be implied by the remarks of Dr. Price. There are gentlemen present who have seen me do as many as three hysterectomies for fibroid tumors in one afternoon. And not uncommonly have I done two at one sitting.

Adjourned.

FRANK W. TALLEY, M.D.,

Secretary.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

SOCIETY PROCEEDINGS.

New York Academy of Medicine—Section on Pædiatrics.

DR. JOSEPH E. WINTERS, CHAIRMAN.

Meeting of February 15, 1894.

DR. WILLIAM P. NORTHRUP read a paper upon

SCORBUTUS IN INFANCY.

Pædiatrists have recently learned to recognize newly a disease, and believe that they have saved a few lives in recognizing it. It is for the purpose of making the knowledge of this disease more general that the Section on Pædiatrics comes before the Academy to-night. Sailors used to have scurvy before they took lime-juice to sea; but do children and infants now have it? You will hear speakers here this evening say that it has been observed in New York, Boston, Cincinnati, Philadelphia, and elsewhere. It was reported in Germany in 1873. In 1878 Dr. Cheadle reported three cases. No cases were recorded in the United States until 1891. He had then re-

ported eleven cases before the American Pædiatric Society. One of these cases died and the pathological findings proved of great value. Scurvy is a disease dependent upon the prolonged use of improper food or absence of fresh food. Its most characteristic symptoms are spongy gums and a tendency to hæmorrhages. Notably these hæmorrhages are subperiosteal collections of blood about the femora and other long bones, escaped blood into and beneath the skin forming petechiæ and ecchymoses, into the gums and membranes of the mouth, intestines, and pelvis of the kidney. The following combinations of symptoms appeared in several cases: spongy gums and swollen thighs.

Swelling of both thighs, gums spongy and bleeding, "black eyes," bloody passages, anæmia.

Spongy gums, swollen thighs, petechiae, demonstrated subperiosteal hæmorrhages.

Most cases have been attributed to persistent feeding of the infant on prepared infant foods and condensed milk. Even a small proportion of cow's milk and breast milk, according to some observers, are not sufficient to protect against this peculiar form of malnutrition. It occurs most among the rich, where strict regimen which has persistently excluded fresh food and fruit-juices has been carried out. Among the poor where the children receive mixed food from the table, and consequently fresh food, they escape scurvy but suffer from rachitis. The age most subject to the typical disease is the second year of life. The most typical symptoms are swollen and painful joints and spongy gums. The treatment,—orange-juice and other fresh fruits, with proper diet. The disease is supposed to be a distinct entity, though it is often associated with rickets. It was formerly believed to be so closely associated with it as to deserve the name of acute rachitis.

Dr. Henry Ling Taylor read a paper entitled

SCORBUTIC PSEUDO-PARALYSIS.

This term was chosen to emphasize a condition frequently occurring in infantile scurvy as illustrated by the following cases: The patient, 11½ months old, had been fed exclusively on condensed milk, and was brought from the South for some supposed spinal affection. Local symptoms developed as follows: weakness in sitting up, later inability to sit up; inability to move the limbs and later the trunk; a tender swelling over the

right thigh; spongy and bleeding gums; swelling about one eye; purplish spots; and a swelling about the right ankle. The nutrition became impaired, and she became sensitive to the slightest touch or movement. When first seen by the writer the condition was critical. Temperature was 102.5°F. She refused to nurse, and screamed loudly at every touch. She had eight teeth, around which the gums were swollen and spongy and ulcerated. Legs were motionless, the toes and ankles could be moved; the reflex were normal; the spine was rigid and somewhat bent; there were no symptoms of rachitis. The child was put at once on Pasteurized milk and received the juice of one orange and two teaspoonfuls of raw beef-juice daily. No drugs were administered. The little sufferer began to gain at once; the symptoms disappeared one after the other; and in two weeks the spine was flexible and straight, and the legs were moved freely. The recovery was permanent. The parents reported that another child of a neighbor, 13 months old, fed upon the same diet, developed painful swelling of the joints, spongy and bleeding gums, and died of exhaustion.

The pseudo-paralysis is one of the most striking of the lower limb symptoms in these cases; the trunk and upper extremities may also be affected. All observers have noted such symptoms. This is due to local hæmorrhagic lesions, but essential paralysis cannot be assumed. This may be due to the blood and serous infiltration into and between the muscles. Contraction of the muscles on their tender periosteal attachments would be instinctively avoided.

Where joint irritation exists there would be local reflex muscular rigidity, which would also operate to prevent motion. This pseudo-paralysis is distinct from other paralytic affections, being distinguished by the accompanying symptoms of scorbutus, normal knee-jerks, and by its speedy subsidence on anti-scorbutic diet.

Several communications were read by Dr. Crandall, secretary of the Section on Pædiatrics.

Dr. Louis Starr, of Philadelphia, said that Dr. Northrup's paper on Scorbutus in Infancy, read before the American Pædiatric Society in September, 1891, was the first attempt by an American to establish the distinct position of that disease, and to explain its origin and treatment. Before this paper appeared he had seen four cases, one of which died. The autopsy findings corresponded exactly with those observed by Dr. Northrup. Since that time he has seen nine cases. In few diseases were the various symptoms so constant in their grouping. The conditions in these cases were as follows:

(1) Immobility, excessive tenderness, and a varying degree of swelling of the lower limbs. The swelling was most marked in the neighborhood of the joints, the skin being tense and often livid in color, but not pitting on pressure.

(2) A purplish discoloration of the gums, which were also often spongy, swollen, and bled readily. These features were entirely absent when no teeth had been cut, and when but few teeth had appeared, were absolutely limited to the gums surrounding them. There had been complete and rapid recovery under anti-scorbutic treatment.

Each of these cases occurred in the best surroundings, and were traced to improper feeding, usually some baby food. Three cases were apparently due to alterations produced in ill-combined milk mixtures by sterilization. The symptoms subsided upon stopping the sterilization, without otherwise changing the food. A typical case was reported in a child of eight months, in which the symptoms consisted of spongy and bleeding gums, pain in and immobility of the legs, and some swelling in the knee- and ankle-joints. Recovery followed regulation of the diet with the administration of a teaspoonful of orange-juice and the same quantity of raw beef-juice three times a day. This was ordinarily the treatment used in all cases. Olive oil rubbed into the limbs brought some relief to the tenderness and assists the nutrition. Some preparations of iron were administered in some cases.

Dr. T. M. Rotch, of Boston, wrote that the first really good work in this country on scorbutus was by Dr. Northrup, and the credit should be awarded him. He reported twenty cases of scurvy. In some of his cases scurvy seemed to have been superadded to an original rachitis. The scurvy rapidly recovered, while the rachitis took the usual slow course. He doubts if there is such a thing as acute rachitis.

Dr. F. Forchheimer, of Cincinnati, wrote, in answer to questions, as follows:

(1) Diagnosis rests upon the hæmorrhagic nature of the symptoms. He believed all the forms classed under the head of purpura, peliosis, and scorbutus to be the same,—*i.e.*, scurvy.

(2) Hæmorrhages that are diagnostic occur under the skin and in the mucous membranes.

(3) Hæmorrhages that occurred under the skin and the peculiar condition of the mouth may exist together or alone. It is difficult to estimate properly the value of the mouth-symptoms in cases where there are no teeth. When teeth are present it may be mistaken for ulcerative stomatitis; but therapeutic experiment will decide the question in a very short time.

(4) Diagnosis rests upon the following symptoms: Pain in the joints of the extremities, spots in the skin, and condition of the mouth.

(5) I believe scurvy to be a collection of symptoms, the cause or causes of which are unknown. It seems from present knowledge to be some chemical change, probably hæmic.

(6) The symptoms disappear very rapidly under treatment; the joint-symptoms begin to improve in a few days; then the mouth, then the spots, lastly, the anæmia.

(7) The most successful treatment has been orange-juice, lemon-juice, and good milk. I cannot refrain from laying stress upon the aid to diagnosis which is found in treatment.

Dr. A. D. Blackader, of Montreal, said he had seen no cases of scorbutus in this country, and inquiry among prominent men of large medical experience in Montreal showed that they had either not seen scorbutus or had failed to recognize it.

Dr. F. Lockwood, of Baltimore, had seen no case since the one which was reported in Dr. Northrup's paper in 1891. He said his dispensary cases were nearly all colored. Ra-

chitis was common. They did not receive artificial foods but ate whatever the table afforded.

Dr. W. D. Booker, of Baltimore, wrote that he had been on the lookout for scorbutus in infants since the publication of Dr. Northrup's paper, but had not seen a case.

Dr. J. Lewis Smith said that although rachitis was common in dispensary practice scurvy was very rare. As he had seen it, the symptoms had been those already described. The gums were not affected before the teeth were present. Anæmia was almost constantly present and a condition of failing health usually preceded that of actual scurvy. In older children he had noticed a peculiar state of mental depression. Death usually resulted from prostration.

Dr. A. Jacobi said that he had recognized scurvy before Dr. Northrup's paper appeared, but he now believed that he had overlooked many cases. In former years he had frequently made a diagnosis of acute rachitis. Most of such cases were undoubtedly scorbutus. They were not infrequent. He had seen them most frequently in winter. They developed almost exclusively among well-to-do people, among children who are artificially fed. A long-continued and exclusive diet of sterilized milk might probably cause the disease. The gums, in his opinion, did not furnish an absolute evidence of scorbutus, although they were, as a rule, affected. He had seen a marked case with teeth in which the gums were not spongy, and another child of six months with no teeth with spongy and bleeding gums.

Scorbutus is, without question, a

disease by itself. It has been diagnosed as acute rachitis, as rheumatism, as trauma when a single joint is affected, and as ulcerative stomatitis. In treatment dietetic management is most important. Fruit-juice is a valuable agent and should be given. Animal food should also be given, but milk is the most important element. It should rarely be given alone, but in connection with one of the cereals. He usually dilutes it with barley-water. Phosphorus is an excellent addition to the treatment, especially when rachitis is present. The official elixir should be given in doses of ten to fifteen minims three times a day.

Dr. L. Emmett Holt had investigated thoroughly the effect of sterilized milk in producing scurvy. In three great institutions, the New York Infant Asylum, Nursery and Child's Hospital, and Babies' Hospital, but one case of scurvy has developed for five years. This case had a diet of malted milk. Most of the children were fed exclusively on sterilized milk. Sterilized milk is too valuable a food to be thoughtlessly set aside because one or two cases out of the many thousands who have taken it developed scurvy. As to the season, he has seen more cases in summer. As a rule, malnutrition precedes the attack, but he has seen one patient who was taking Mellin's food rapidly develop a severe attack in the most perfect health.

As to diagnosis, one case had been considered sarcoma of the knee. The swelling was immense, and the child died. One had been treated for acute osteitis of the knee, a plaster splint having been worn for some time.

Three had been considered rheumatism, and one infantile paralysis. He had studied the effect of Mellin's food in six recent cases of scurvy. One child had taken five ounces a day for eight months; another, a bottle every two days for six weeks. With a single exception his cases have all been private ones, and with a single exception all had been from the country. They did not develop in institutions, because, during recent years, the feeding of children in institutions had been rational, far better, in fact, than that of the ordinary child outside. Scurvy is a dietetic disease, and must be cured by diet. A simple change of diet produces rapid and often brilliant cure.

Dr. W. L. Carr said that scurvy is rare in dispensary and hospital practice. In his cases diarrhoea had usually preceded the development of the disease. In one patient, nine months old, lacto-preparata had been the food. The case had been mistaken for one of rheumatism. The case was markedly rachitic; the upper and lower extremities had both been involved, but improvement was first noticed in the arms. The swelling was most common over the upper third of the thigh.

Dr. F. M. Crandall reported a case which had been fed on Nestle's food, Mellin's food, and for six weeks almost exclusively on prepared barley. Spongy and bleeding gums, swelling of the right knee, and great pain when moved or handled were the prominent symptoms. The use of orange-juice, with a diet of modified milk and beef-juice was followed by rapid and complete recovery.

Dr. J. H. Fruitnight reported five

cases, four of them ranging in age from eleven to twenty months. All were in private practice and artificially fed.

Dr. Max Einhorn, from recent laboratory experiments, believed that the disease might be due to a certain chemical change in the blood.

Dr. Joseph E. Winters said that the worst case he had seen was fed exclusively on an infant food. Recovery on a milk diet alone had been rapid and complete. He uses sterilized milk, and does not believe that complete sterilizing, if not carried beyond twenty minutes, will produce scurvy.

Dr. Northrup said that the chief object of the meeting was to bring

out varied experiences, and to secure data which would establish the condition as a distinct disease of childhood. It was clearly proved that it developed almost exclusively among private patients, and in an overwhelming proportion of cases among those fed on a proprietary food. No one food was an especial offender, except as it was especially advertised and largely used. The most popular food would show the greatest number of cases of scurvy. If it were popular enough, it would obtain a monopoly on the disease. The pictures of the blooming infants reared on these foods were attractive, but the proprietors failed to publish pictures of the scurvy cases.

ABSTRACTS FROM CURRENT LITERATURE.

Bacteriology of Diphtheria.

VEILLOY (*Semaine Médicale*, September 20, 1893) gives a *résumé* of the Klebs-Löffler bacillus and other bacteria influential in producing or favoring complications of this disease. The Klebs-Löffler bacillus having gained access to the excoriated skin or mucous membrane rapidly multiplies there. The parasite vegetates on the *surface*. "They never penetrate the mucosa; they never invade the glands, the internal organs, or the blood." They generally produce a false membrane, but their activity is not limited to this. They secrete a toxine, which is readily absorbed and poisons the whole organism. It is attenuated or destroyed by a temperature of 140°

to 212°F. It is this toxine which produces the general prostration, the fatty degeneration, the nephritis, the paralysis, etc.

The disease is primarily local, but very soon becomes general. The bacillus and its toxine do not explain all the complications of the disease. Various germs, mostly cocci, invade the mucous membrane, perhaps the internal organs, and greatly aggravate the disease. The streptococcus and the pneumococcus are the most common germs. He divides the condition due to different organisms as follows: Local accidents due to the Klebs-Löffler bacillus; general accidents due to the toxine; accidents

due to infection. The treatment is, hence, varied. He advises brushing the membrane with cotton-wool wrapped around forceps. Rather than tear the membrane loose he

uses sprays. He employs boric acid saturated solution, with 1 per cent. lactic acid. He believes that sero-therapy has a brilliant future as a remedial means.

An Analysis of Twenty-eight Cases of Intussusception.

ECCLES (*Centralb. für Chirurg.*, No. 32, 1893) says of the twenty-eight reported cases seventeen were males and eleven females. Eighteen were in children under 1 year, four between 1 and 2 years, and three from 2 to 5 years, one of 7, one of 9, and one of 39. The three cardinal symptoms were: Abdominal pain, vomiting and bloody stools. The peculiar form of the abdomen could be made out in eighteen cases.

The treatment may be expectant, mechanical or operative. In four cases the expectant plan was adopted, resulting in two deaths and two recoveries. One case was treated with injections of air, and required a secondary laparotomy. Nine were treated with injections of oil, water and milk, resulting in four deaths and five recoveries.

PÆDIATRIC THERAPEUTICS.

LOCAL APPLICATION IN DIPHTHERIA.

R Acid. salicylic., 1.00.
Alcohol, q. s. to dissolve.
Glycerin, 0.40.
Infus. eucalyptus, 0.60. M.

SIG.—Apply to diphtheritic patches by means of a swab, consisting of a stick armed with absorbent cotton every hour during the day, and three times at night.

—*Jules Simon.*

AN EXTERNAL APPLICATION OF SALICYLIC ACID IN ARTICULAR RHEUMATISM.

R Acid. salicylic., 1 part.
Ol. terebinthin., 1 "
Lanolin, 1 "
Adipis, 8 parts. M.

SIG.—Spread over the affected joints, and cover with flannel.

NOTE.—In this treatment the unpleasant effects of the internal administration of salicylic compounds are not observed.

—*Bourget.*

EXPECTORANT MIXTURE IN CHRONIC BRONCHITIS.

R Terebene, f ʒii.
Tinct. opii camph., f ʒss.
Ol. menth. pip., gtt. vi.
Syr. acaciæ, q. s. ad f ʒiii. M.
SIG.—Teaspoonful every four hours.

—*Dorning.*

FOR INSOMNIA.

R Acetanilid, 3 grammes.
Muc. acaciæ, 40 "
Syrupi, 40 " M.

SIG.—Teaspoonful every three hours.

—*McMechan.*

BROMOFORM MIXTURE IN PERTUSSIS.

R Bromoform, m. xv.
Muc. acaciæ, f ʒ iss
Syr. toltan., f ʒss. M.

SIG.—A teaspoonful three or four times daily.

—*Bedford.*

IN MEMBRANOUS CROUP.

Hydrarg. chlor. mit., gr. ii.
 Sodii bicarb., gr. xxiv.
 Pulv. ipecac., gr. i.
 Pulv. pepsinæ, gr. xxiv. M.
 Ft. in chart. No. xii.
 One powder every two hours.

— *Starr.*

IN PRICKLY HEAT.

R Zinc carbonat. præcip., ʒiv.
 Zinc oxidi, ʒii.
 Glycerin, fʒii.
 Aq. rosæ, fʒviii. M.

SIG.—Apply locally.

— *Tilbury Fox.*

IN CHOLERAIC DIARRHŒA.

R Sodii salicylas, gr. xii.
 Ferri sulphatis, āā fʒss.
 Glycerin, q. s. ad fʒii. M.
 Aquæ,

SIG.—Teaspoonful four times a day.

— *Braithwaite.*

LOTION FOR THE ITCHING IN SCARLET FEVER.

R Acidi carbolici, ʒi.
 Tinct. camphoræ, fʒii.
 Aquæ, Oi. M.
 Ft. lotio. Shake well, and apply over surface when needed.

— *J. Lewis Smith.*

EXPECTORANT MIXTURE IN BRONCHOPNEUMONIA.

R Ammonii carbonatis, gr. xlviii.
 Pulv. acaciæ et sacchari, āā q. s.
 Spt. lavandulæ comp., fʒii.
 Aquæ, q. s. ad fʒiv. M.

SIG.—A teaspoonful in water every two or three hours, for a child of 5 years.

— *Pepper.*

TONIC AND ASTRINGENT MIXTURE IN THE CHRONIC DIARRHŒA OF CHILDREN.

R Acid. sulphuric. aromat., gtt. xl.
 Morphinæ sulph., gr. ss.
 Elix. simplicis, fʒss.
 Aquæ puræ, q. s. ad fʒiv. M.

SIG.—Dose for a child of 2 years, a teaspoonful three times daily in a little water.

— *Pepper.*

SUPPOSITORIES FOR CHRONIC CONSTIPATION OF INFANCY.

R Ext. belladonnæ, gr. ss.
 Aloe purificat., gr. xii.
 Ol. theobrom., ʒii. M.

Et ft. in suppos. No. xii.

SIG.—One twice a day, and subsequently one at night, or every other night.

— *Starr.*

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No. 7

ORIGINAL COMMUNICATIONS.

Hysterectomy for Large Tumors.¹

BY I. S. STONE, M.D.,

WASHINGTON, D. C.

WHEN should a tumor be called large? Dr. Keith says twenty pounds or more. He would advise hysterectomy in these cases only. The writer firmly believes that if Dr. Keith's advice be taken, most surgeons would abandon the operation as he did, not, however, because his mortality was excessive, for his success in difficult cases will probably never be surpassed.

Large tumors well supplied with blood through omental and other adhesions do not cease growing at the menopause. Every operator knows it

is the rule for them to contract adhesions to everything within reach. Quite the reverse with ovarian tumors which frequently do not have these complications. It is improbable, therefore, that surgeons will ever succeed in reducing the mortality of hysterectomy to that of ovariectomy, when the abdomen is filled with tumors of large size.

The writer of this paper, with many others, would like better and more accurate information on this subject. What is the mortality when large tumors of the uterus are removed? Is the operation for their removal justifiable? He feels rather deeply upon this point, because a distinction is rarely made by writers generally. His mortality has been from shock following difficult operations for large

¹ The two specimens of uterine fibroids contributed to the Museum, and numbered respectively 10,634 and 3077 p.p., weighed respectively, the former thirteen pounds ten ounces, the latter ten pounds twelve ounces, as received at the Museum.

The former was said to be from Lucy H., the latter from F.—D. S. Lamb, Pathologist.

growths, only once in twenty hysterectomies having lost a patient having so small a tumor as five pounds. We are not informed by gentlemen who frequently perform hysterectomy, and who are in a position to speak with authority, as to several points at issue.

Do they select their cases? We may infer that they accept and operate upon every case, and get as good results in worn-out, debilitated subjects with large tumors, as with patients in good condition, with small, three- or five-pound growths. How many of these operations are for large tumors, according to Dr. Keith's standard? Long lists of hysterectomy operations appear in standard text-books (Pozzi, for instance), and in otherwise excellent journal articles, with this most important fact omitted. It would also be well to have tumors carefully weighed, not *estimated*, and, in addition, a verification of some disinterested person would add to the value of such reports.¹

To return to Dr. Keith's very interesting and exceedingly valuable report, we find in 8 cases the tumor weighed 20 pounds or over, to the extreme limit of 42 pounds.

In 16, weight 10 to 19½ pounds; in 14, under 10; and in only 3 of these under 5 pounds. Total, 38 cases.

Three deaths, as follows: 1 tumor weighed 30 pounds, 1 weighed 27 pounds, and 1 weighed 4 pounds.

A remarkable record. No better proof of the danger in removing these large tumors is needed than the almost universal desire evinced by surgeons to operate early,—*i.e.*, before

they reach beyond the five-pound limit.

The author has never attempted the removal of a solid tumor weighing over twenty pounds, nor has he ever witnessed the successful removal of one half so large by any other operator. He has never had one referred to him, whose probable weight would exceed twenty pounds. A tumor of this size fills the abdomen, and unless the patient is of colossal size it will displace the stomach and spleen, and possibly the liver and heart upward. It may be taken for granted that a tumor of five pounds will reach the umbilicus, and, perhaps, above it. He once removed the entire uterus with fibroid undergoing sarcomatous degeneration, which filled the space between the umbilicus and pubis, when, to his surprise, it weighed less than three pounds.

Plate I, Fig. 1, shows a patient, L. H., with a fifteen-pound tumor in position. She is above the average height, and weighs 150 pounds. Her girth at umbilicus was thirty-nine inches before operation. The tumor, after reception at the Museum, weighed thirteen pounds ten ounces, according to Dr. Lamb, the pathologist. It is the largest successfully removed by the writer.

The operation was difficult, on account of greatly-degenerated omentum, which had to be entirely excised. Modified Baer's operation, forty-five minutes. Severe shock on the table, and for three days after, then quick and perfect recovery. The whole abdomen was filled, and the tumor pressed up against the liver. It was a soft fibroid. The incision was not as long as would have been required by a solid tumor, and ex-

¹ The above remark is made after consultation with an eminent curator of a museum, who says specimens are rarely found as heavy or large as reported.

PLATE I.



FIG. 1.—Lucy H., 13 lbs., 10 oz.

[See page 378.]



FIG. 2.—F., 10 lbs., 12 oz.

HYSTERECTOMY FOR LARGE TUMORS.

[See page 379.]

tended about three inches above the umbilicus.

Plate I, Fig. 2 shows a ten-pound twelve-ounce solid tumor in position. Patient, Ms. F., weighed 130 pounds.

Rather below average height. Abdomen well filled above ribs on each side. Baer's operation. Recovery. Operation one hour, and was delayed somewhat by mesenteric adhesions.

Conservative Surgery on the Uterine Appendages.¹

BY J. M. BALDY, M.D.,

Professor of Gynecology in the Philadelphia Polyclinic; Surgeon to the Gynæcean Hospital; Gynecologist to the Pennsylvania Hospital.

THIS subject is an exceedingly difficult one to discuss without being misunderstood or without conveying false impressions as to just what idea one wishes to convey. In considering it, therefore, this paper will take the form, more or less, of a criticism of papers on similar subjects which have been previously published, and which appear to me to convey an entirely erroneous impression in many directions, however praiseworthy the objects sought may have been.

The proposition has been made that a woman is better off mentally and physically with the functions of menstruation and ovulation than without them. This being conceded, as it must be by all reasonable observers, certain other definite propositions are made to the end that where surgical interference is deemed necessary these functions may be preserved. Not only this, but the future possibility of impregnation enters into the discussion as an exceedingly important factor.

The whole subject may be considered from two stand-points,—the Fallopian tubes and the ovaries.

The Tubes.—The broad proposition may, I think, safely be laid down that a Fallopian tube whose fimbriated end has been destroyed and whose canal has been consequently sealed up, is useless for further good to that woman, with but rare exceptions. These exceptions will exist in cases of hydrosalpinx, and an effort to render such tubes patulous will only be justifiable in those rare cases in which both tubes are diseased, in which the tubal distention is not great and in which there are special reasons why the patient should desire future impregnation. It will be readily seen that as regards the tubes only the question of future pregnancy need be considered, future ovulation and menstruation do not enter into the consideration, as from this stand-point the ovaries alone are concerned. These statements are based on the belief that the attempt to secure a patulous canal in an occluded tube is dangerous to the patient's future health as well

¹ Read before the Philadelphia Obstetrical Society, March 1, 1894.

as to her life, and that the chances of the effort proving a failure are far greater than those of success.

The attempt should be made in cases of hydrosalpinx alone for the reason that the normal calibre of the Fallopian tube is only sufficiently large to allow of the passage of a bristle. To give a fair chance for the canal to remain patulous after a part of the tube has been resected or an opening has been made into its canal through the tubal wall at any point, the mucous membrane lining the tube and the serous membrane covering it must be joined together by sutures over the cut edges, otherwise the opening is almost sure to become closed in a few hours by the lymph thrown out from the cut surfaces, to say nothing of that from the peritoneum itself. How impossible of accomplishment the joining of these two membranes would be in the case of a tube without a distended canal, especially in the presence of thickened inflammatory walls, is at once apparent to any one with practical experience in handling these parts; how difficult even in the presence of a dilated canal, can be readily appreciated. Should the canal be distended with pus or blood (hæmatosalpinx), who would care to break down the barriers nature in her wisdom had imposed, in the shape of adhesions, and allow of free access to the peritoneal cavity of the sepsis which was originally the cause of all the trouble? How many cases so treated, think you, would not progress to a worse condition, or even to death? Such statements are not mere supposition, but are accomplished facts in the hands of such a careful observer and experimenter as Polk.

In his table of fifty cases, reported May 6, 1891, to the American Medical Association, in Class A are to be found two deaths following an effort on his part to keep the tube patulous after either resecting it or splitting up its canal. Ten patients, then operated upon by Polk, yield two deaths, or a mortality of 20 per cent. It must be borne in mind that these operations are done in a class of patients in whom an almost *nil* mortality would be obtained had the appendages been completely removed, they being the simplest of the class due to pelvic inflammation. Does this not amply justify the statement that the effort to render a closed tube patulous is dangerous to the life of the patient?

CASE I.—*Class F*, of this same table, records a patient from whose ovary he enucleated a small ovarian cyst, closing the edges of the wound with silk sutures, the result of the irritation being such extensive disease of the Fallopian tubes as to subsequently require complete removal.

In Case I, *Class A*, the ends of the tubes were soon covered with granulation-tissue, and, in consequence, speedily closed, producing hæmatosalpinx, and, finally, necessitating the removal of the appendages. Is not this, taken together with Case I, *Class F*, sufficient proof of the fact that the canal of the tube will again be closed by the lymph which is thrown out on account of the irritation of the parts incident to the operation, to say nothing of the inflammation due to the spread of sepsis from the opened tubal canal? In this table of ten cases there is no proof offered that even a single tube remained patulous. As a matter of fact, in all the cases in which there was a subsequent oppor-

tunity to examine the seat of the operation, the tubes were closed and greater disease existed than primarily. It is only fair to state that, in a later report of twenty-eight other patients operated upon on these same principles, there occurs one in whom subsequent pregnancy developed after the removal of one tube and the resection of the second. In view of the chances and the facts as found in actual experience, this case must be looked upon as unique if not accidental. Even granting, however, that the same proportions hold good in future experiments in this direction, can one pregnancy in a dozen or more cases warrant such surgery in the face of two deaths, the necessity of several subsequent laparotomies with complete removal of the appendages, and with a doubtful result as to cure of symptoms in many of the remaining cases? Is not my opening proposition amply justified both in theory and practice?

The Ovaries.—No matter what may be the fate of the tubes, not only should all sound ovaries be left, but every effort should be made to preserve to the woman as much sound ovarian tissue as possible, is a proposition to which I can heartily subscribe. The further statement is advanced that where the extent of the disease is such as to destroy the organ, or where the nature of the disease is such as to insure its extension, the most radical removal must be made. This confines our discussion to smaller simple ovarian cysts, in which some of the organ remains intact, and to hæmatomata of the ovaries. The difference here, I take it, will rest more upon what we consider disease than upon its management. Ovarian cysts, if of

such size and condition as to leave the possibility of saving a part of the ovary, should be resected, but when operators speak of small cysts scattered over the surface of the ovary, and advise resection and puncture, I am forced to dissent. Such ovaries are, in fact, perfectly normal, and are not amenable to surgical treatment of any kind. The condition is merely a distention of some of the Graafian follicles, which exist almost, if not universally, and which give rise to no symptom whatever. A careful examination of reported cases will show a large proportion of such ovaries, a class which might well swell one's list indefinitely; a class which it is not fair to introduce into statistics on this subject, and a class which personally I never operate upon, or whose abdomen I close without doing anything, if I have made a mistake and performed laparotomy. So again with hæmatomata of the ovaries. I am extremely sceptical as to the amount of suffering such a condition usually produces, when small and uncomplicated. With the abdomen open I would finish the operation, either by removal of the offending ovary or ovaries, or by a resection of the cyst as the opportunity offered; but did I know the true condition prior to operation, I should hesitate long before acting surgically in those of small or moderate size. That many of these blood cysts are simple hæmorrhages into Graafian follicles is plainly evident, and many, if not most of them, would be duly taken care of by nature, especially when small, I am convinced. At any rate, because a woman has a backache, and pain in the ovarian region, and a tender pelvis on manual examination, it is not conclusive evi-

dence that the ovaries are the cause of the trouble, because they contain hydrops folliculi, or small hæmatomata. It must be borne in mind that we are considering a class of cases in which it is extremely dubious whether or not disease actually exists, and there is more room for conservatism in the direction of no surgery than in a modified surgery. What matters it whether a woman or a dozen of them have an abdominal section, these hydrops folliculi or hæmatomata punctured or resected, and after their operation their pains are relieved? While writing this paper a patient came into my office, on whom I had performed a laparotomy for long-continued pelvic, inguinal, and back pains, some months ago. Normal ovaries filled with small cysts (hydrops folliculi) were found, dropped back into their place, and the abdominal wound closed. After the ordinary confinement to bed for four weeks she was discharged. She was told one ovary had been removed, and she would be a well woman. To-day she is in perfect health without a particle of her old pain or discomfort. Had I punctured or resected a few of those cysts, would the result not have been credited to the surgery rather than to her long vacation from work and petty annoyances, and to her enforced absolute rest and good food and attention? How many such cases could we not all quote? And is it not a fact that the vast majority of these patients who have been experimented upon in this line of surgery are drawn from that class of women who are harassed and dragged down by their methods of life and troubles? and think you that they would not most, if not all, of them be relieved and cured to just the same extent as

they are by this so-called conservative surgery, if they had the same rest, care, food, freedom from anxiety, home-worries, etc., minus the surgery? This proposition is fully substantiated by the statement of Polk that forty-eight of his patients, out of a total of fifty, were patients in Bellevue Hospital, one in St. Luke's Hospital, and one in her own home.

In cases of prolapsed and tender ovaries an effort can always be made to cure the case, and very frequently with success, by stitching the ovarian ligaments to the upper surface of the broad ligament between the Fallopian tube and pelvic wall. It may be advisable to remove an ovary, but for simple prolapse both ovaries should never be removed.

Adhesions.—Adhesions in themselves are never an indication for removal of either the Fallopian tube or the ovary. In some instances, after the parts are dissected loose and examined, the tube is found healthy and patulous, and the ovary in good condition. With hysterorrhaphy (in the case of a retro-displacement) and other methods at our disposal, the sacrifice of such parts without an effort to save them is scarcely justifiable.

Except in the case of sound ovarian tissue left for the sake of maintaining ovulation and menstruation, and the female characteristics which accompany the performance of these functions, less pregnancy, the field for genuine conservatism in these directions is not nearly as extensive as some would have us believe. On the other hand, the field for less surgery in the imaginary cases is exceedingly large.

My own experience in so-called

conservatism has been unfortunate as compared with what is reported by others. Since hearing Polk's paper read before the American Medical Association, in 1891, I have been deeply interested in this subject, and have made repeated efforts in this direction. In picking my cases for the experiments care has been observed to choose only such as had actual, undoubted disease; all doubtful cases as mentioned in this paper have been excluded. The cases have seemed to me to be in many respects typical ones for this experiment, and in not a single instance have I failed to regret my decision. Under these circumstances it cannot be wondered at that I am not an enthusiast in this matter. A careful perusal of the cases will give a practical illustration of many of the points raised throughout this paper.

The patients in all number twelve. Three of them are known to have been forced to have subsequent operations, and the other nine have remained unrelieved, six of the nine coming under observation from time to time, suffering continually, treated continually, and all of them needing, and will eventually have, a second operation. Two of the six have passed into the hands of other physicians in neighboring cities. The doctors in both these cases have written me in regard to the woman, asking what I had done at my operation, and stating that they were still suffering, and could only be relieved by an operation. One woman, an old patient of Brandt's, has returned to him in hopes of relief. The remaining three have disappeared from observation, suffering as much as before their operation, and have probably been reoperated upon by

some one else, more than likely by some of my hearers; at least it is to be hoped so for their own sakes. In no class of cases in my work during the past few years do I look back with so much regret as upon this one, not even, I think, those few neurotic women upon whom I have allowed myself to be induced to operate.

CASE I.—A. A. Double ovarian hæmatomata the size of a small English walnut. Blood-clots removed from both ovaries. No relief.

CASE II.—A. L. H. Double adherent salpingitis. Adhesions freed. Ovaries enlarged, but not otherwise abnormal macroscopically. Fallopian tubes contained no fluid, but had thickened, inflammatory walls. Canal patulous. Adhesions freed. Appendages, which were prolapsed, brought into normal position; free irrigation. No relief. Patient anxious for second operation.

CASE III.—M. M. Double adherent salpingitis and cystic ovaries. Appendages freed, tubes thickened, but patulous. Cysts in ovaries emptied. Irrigation. No relief.

CASE IV.—M. D. Double chronic salpingitis and ovaritis. Both husband and wife insisted, prior to operation, that unless pus was found nothing was to be removed. Adhesions freed, prolapsed appendages brought into proper position. Cysts in ovaries emptied. No relief. Six months or more later laparotomy. Appendages free and in good position. Complete removal of appendages and uterus. Cure complete.

CASE V.—L. H. V. Hydrops folliculi in one ovary emptied. Small cyst size of English walnut resected from second ovary. No relief.

CASE VI.—M. A. Double adherent

salpingitis and ovaritis. Adhesions freed. Fimbriated end of tubes partly patulous, and walls soft, but greatly congested. Ovaries macroscopically healthy. Irrigation. No relief. Subsequent laparotomy disclosed adhesions worse than ever; both tubes closed with hard walls, thickened with inflammatory exudates. Both appendages removed. Cured.

CASE VII.—C. T. Omentum adherent to abdominal wall. Ovaries and tubes adherent. Adhesions released. Cysts in ovaries ruptured. Irrigation; drainage. No relief.

CASE VIII.—L. R. Chronic adherent salpingitis; small cysts scattered over one ovary. Adhesions released. One tube and ovary removed. Tube on side of cystic ovary patulous. Cyst in ovary emptied. Irrigation. No relief.

CASE IX.—R. G. Right tube and ovary deeply congested and enlarged. Left tube contained hæmatoma. Blood-cyst resected. Irrigation; drainage. No relief.

CASE X.—Prolapsed adherent ovaries and tubes freed. Tubes patulous, but diseased. Appendages placed in normal position. Irrigation; drainage. No relief. Subsequent laparotomy, months later, disclosed both tubal openings closed, both tubes enlarged, hard, and infiltrated with inflammatory products. Both appendages adherent at a higher level than formerly. Both removed. Cured.

CASE XI.—H. H. Prolapsed enlarged adherent ovaries and tubes. Ovaries contained hæmatomata. Blood-cysts emptied; adhesions freed. Irrigation; drainage. No relief.

CASE XII.—Small hæmatoma of one ovary, small cyst of the other. Tubes healthy. No adhesions. Both

cysts emptied. No relief. Examination months later disclose adherent tender masses on both sides of uterus. Diagnosis.—Double pelvic inflammatory disease.

I might add one more case not coming directly in this class of cases, but showing the danger of attempting to save ovarian tissue.

CASE XIII.—Hysterectomy for fibroid tumor by the extraperitoneal method. One ovary brought just high enough for constricting wire to include lower half of ovary left in stump constricted by the wire. Three months later second operation for removal of ovarian cyst as large as a big Florida orange, which sprang from this remnant of ovary.

It would be folly to attempt to formulate any hard and fast rules for the treatment of this class of patients; each case must be settled on its own merits. But from a careful study extending over some years, certain general propositions may not be out of place.

(1) The vast majority of Fallopian tubes, whose canals have been closed by pelvic inflammations, have been rendered useless for all time to come.

(2) There is no way in which we can with any certainty distinguish those few cases in which the tube might again be rendered patulous, and in experimenting in this direction practice has clearly demonstrated that infinite harm may be done as against the little good.

(3) It is always well to save healthy ovarian tissue for the sake of the continuance of menstruation and ovulation where this can safely be accomplished.

(4) Uncomplicated small hæmatomata and hydrops folliculi do not, as

a rule, give rise to distressing symptoms.

(5) It is extremely probable that in the case of the vast majority of uncomplicated ovarian diseases upon which so-called conservative surgery has been used, the relief of symptoms has arisen not from the surgery, but

from the enforced rest in bed, proper feeding, nursing, and removal from care and worry; the disease being general and not local.

(6) Adhesions or prolapse do not necessarily necessitate removal of the uterine appendages.

Certain Erroneous Principles and Methods in Gynæcology.¹

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It is by no means my intention to canvass the whole field of gynæcology in this paper, pointing out all the views and practices that I regard as erroneous. Such a course would be at least open to the objection of wearying the listener, for the moot points in gynæcology as now practised are many, and the day has long passed when questions of this character can be regarded as settled beyond dispute by the *ipse dixit* of an alleged authority, or even by the consensus of opinion and practice of many physicians. The history of medicine teaches many things, but nothing more clearly than that large bodies of the profession may grievously err in their views and practices.

My own views of present errors are merely given for what they are worth, as they are tested in the crucibles of practice and common sense.

IS GYNÆCOLOGICAL SURGERY SYNONYMOUS WITH GYNÆCOLOGY?

Probably the most fundamental error of the day in this matter is the tacit assumption of many that gynæcology is synonymous with gynæcological surgery. I have possibly dwelt upon this before, but it is none the less true, and I am impelled to repeat it, and drive it home into our inner consciousness by reason of that scientific quality of mind as well as of matter, inertia, which permits us to change habits of thought but slowly when a certain impetus has been gained in the wrong direction. This assumption that the diseases of women are the exclusive domain of the surgeon had its bad results at its inception, but was at that time by no means so freighted with dangerous possibilities as at the present, when, under the stimulus of a reduced mortality, due to the slowly-perceived duties of surgical cleanliness, the

¹ Read before the Obstetrical Society of Philadelphia, March 1, 1894.

most heroic operations are daily practised by these alleged masters of the whole art of curing womanly ills. Gynæcology should be understood as embracing the whole field of the affections commonly found in women, particularly those likely to be confounded with purely local faults, such as disorders of the nervous, digestive, and eliminative systems.

I do not for a moment wish to deny the value and signal services of surgery in these affections; it is only the assumption that this department of gynæcology is the whole of it that I desire to point out as an important error and one that is responsible for many radical mistakes in treatment.

IS REMOVAL THE ONLY PROPER COURSE TO PURSUE WITH DISEASED ORGANS?

A sufficient text upon which to arraign some of these erroneous views thus conceived and born may be found in a few words spoken by a visiting surgeon in a discussion in this society during the present winter. At the close of his remarks on a paper read by Dr. Goodell, this speaker asserted his conviction that where seriously diseased structures are found in the pelvis he still regarded their removal as the only proper course. Without invidious distinction, this sentiment may be taken as the working creed of the whole body of surgical gynæcologists, who regard certain ultra-mechanical methods with which they are familiar as applicable to all diseases of women. But if the only proper course to pursue in pelvic diseases is to remove diseased organs, how happens it that this principle has not been applied to other portions of the body? Typhoid fever, dys-

pepsia, chronic metritis, and the whole list of organic inflammations are clearly due to local diseased organs, yet we do not hear of the removal of these structures being either proposed or practised. It may be said, of course, that the preservation of life would be impossible should the organs be removed in these cases, but such questions of expediency do not have place when the parts affected are not more essential to life than the pelvic organs, yet we still fail to hear of any penis being removed for gleet or stricture, testis for mere orchitis, limbs for an arthritis, or eyes for a keratitis. It is even considered justifiable to remove the ovaries for an ecchymotic extravasation of blood into the broad ligament or surrounding cavities or tissues, when it is well known that a much larger hæmatoma of the orbit, a black eye, will get well in a few days.

But even if it were the practice to remove organs not hopelessly diseased in other departments of surgery, it would still be proper to protest against such a low estimate of medical responsibilities in this or any department, and to point out that even a cure of an affection gained by the loss of a portion of the human body is a confession of scientific incompleteness with which we should not be satisfied.

PREVAILING MECHANICAL METHODS INCONSISTENT WITH RECENT BACTERIAL DISCOVERIES.

A great majority of these hasty and useless amputations of pelvic organs that are still amenable to cure, as well as many ultra-mechanical methods in minor gynæcology, arise in a misconception of the nature and course of certain affections essentially

catarrhal in character. The advent of exact knowledge of the microbic nature of these affections proving them to be primarily traceable to diseased mucous membrane, has laid to rest many theories of pelvic disease, notably those relating to displacements and obstruction, yet, sad to say, these same affections are still treated in accordance with the dead theories, and a large portion of the income of instrument-makers flows from their sale of pessaries and dilators.

Entrenched behind an old belief that the uterine congestion and engorgement that accompanies backward and downward displacements of the uterus were secondary to the displacement, the method of treatment is the correction of the displacements first by mechanical means, in the hope that a proper position and easier circulation will cure the case. That relief will at times follow this procedure is unquestioned, but the far greater number in which it fails to either reduce the hyperplasia or the subjective symptoms proves that the reasoning is at fault. This mechanical theory of the causation of hyperplasia is, in fact, a unique survival amidst the present facts of the true nature of endometritis and its sequelæ, —the various atrophies and connective-tissue replacements of the uterine muscle. Modern pathology points clearly to microbic agencies as the initial cause of the more common alterations in the health of the endometrium and consecutive changes within the parenchyma, even if a trauma, such as a laceration, be the means of admitting the germs to a foothold within the tissues. Flexions are doubtless due to local, one-sided

atrophies of the uterine muscular tissue, while downward and backward displacements are the conjoint effect of hyperplasia, tight lacing, and relaxation or injuries to the pelvic floor.

The most important conditions present, therefore, in endometritis, flexions and displacements are histological alterations within the tissues of the uterus. Great relaxation of ligaments, and even considerable impairment of the pelvic floor, may exist without material alteration of the situation of the uterus, and without subjective symptoms of any kind, as can be readily proven by any one who examines any number of multiparous women who do not consider themselves ill. The majority of women, in fact, who have had three or more children, present these symptoms of relaxation without descensus, and unless there is a descensus due to a still existent hyperplastic inflammation, or a rectocele or cystocele, they have no complaints to make.

In view, therefore, of the easily demonstrable histological changes always present in flexions and displacements that cause suffering to the patient, it is manifestly proper to combat the morbid processes within the uterus by curative agencies adapted to the conditions rather than by distending and paralyzing the vagina in an effort to remove a remote consequence of the disease, or by excising a mere portion of the diseased organ. A restoration of tone and function to the parts should be the result of well-directed efforts.

THE CERVICAL LACERATION MYTH.

The same objections lie against the idea that a healed tear of the cer-

vix has any true pathological importance, unless the laceration, by virtue of its extent, interferes with pregnancy. The symptoms attributed to the tear are due to the consequences of microbic invasion of the uterus, and though the rest and hygienic accompaniments of the operation for repair at times favorably affect the patient for awhile, there is rarely any improvement noted in cases suffering from symptoms traceable to the uterus. The cause of the suffering is not the hiatus in the lips of the uterus, nor the much-maligned scar-tissue at the apex, but lies in the chronically-inflamed uterus. To cure the patient we must cure the endometritis, metritis, or hyperplasia, as well as any enfeeblement of the nervous system consequent upon them. After that is done it is time to consider the wisdom of repairing the tear, if it is a bad one. If hot water, glycerin tampons, and iodine to the vault have failed, the patient should be placed on mixed galvanic and faradic treatment, applied within the cavity of the uterus by means of a pliant electrode covered with moist absorbent cotton. It is extremely rare that improvement does not show itself immediately, as the contractile effects of the two currents are efficiently assisted by the microbicidal and decongestive action of the positive pole of the galvanic current.

OÖPHORECTOMY AS A DISEASE.

As to the buckets filled with ovaries and tubes that are nightly paraded in our societies, words fail me. The disease for which these organs are removed exists in the minds of the operators rather than in the bodies of the patients, and has stained the last quar-

ter of the nineteenth century with an indelible blot on the fame of medical practice. I leave the discussion of this woful epidemic to posterity, and will merely remark that the catarrhal and inflammatory affections of the tubes and ovaries for which these organs are thus amputated are generally amenable to curative influences patiently prosecuted, chief of which is the direct application of the galvanic current to the uterus, or the indirect application of the same, and the faradic current to the ovary itself. Probably the most powerful means is the uterine method when it can be safely employed, for we can thus initiate a curative process at the point in the mucous tract from whence the initial inflammatory condition had its start, and where it still remains in most cases.

THE PREVENTION OF OVARIAN DISEASE.

But a more easily applied remedy lies in the prevention of tubal and ovarian disease by a recognition that they are simply extensions upward of microbic infections of the uterus. In the early cure of virginal endometritis, subinvolution, and gonorrhœal invasions by intrauterine galvanic applications, associated with proper hygienic measures, we may stamp out the disease as a conspicuous factor in modern life, even though hampered as we are with the catarrh-breeding environment of American climate and habits. It is while this affection is still in the uterine stage of its existence that these young women may be saved from the future invalidism of ovarian disease, with its unwelcome vista of a suggested sexless future; and I have had the pleasure of seeing

a number of cases thus rescued, both from unsound health and from the irrevocable consequences of an unwisely-suggested castration.

ENDOMETRITIS THE INITIAL LESION IN MANY PELVIC DISEASES.

In spite of the practical neglect of endometritis by most of our active gynæcologists, who are merely content to remove rather than cure its consequences, there can be no question of its great practical importance in the ætiology of pelvic inflammatory disease, and he who cures a chronic case accomplishes results of far-reaching consequence to his patient. I have already indicated my own methods in dealing with this affection in the paragraph on laceration.

MENORRHALGIA AND THE OPERATIVE PRODUCTION OF LACERATION.

Closely allied to this question is that of painful menstruation, for which I have suggested the term *menorrhagia* as preferable to *dysmenorrhœa*. To the minds of careful investigators the old theory that this symptom was due to a mimic labor with an obstructed outlet has been completely disproved. No accumulations have ever been shown to occur in these cases, and the fact that a large dilator can be inserted within the cavity of the cervix disproves the existence of any obstruction to the flow of the menstrual fluid. Spasmodic contractions of the circular muscular fibres of the internal os may be produced by the irritation of a sound, but it is by no means proved that these fibres are contracted at the time of flow; a case of my own, in which I inserted the sound during an attack of pain, tends to prove the contrary,

for an internal os that admitted the sound with difficulty at other times was quite patulous during the pain. A rational review of this question is convincing that menstrual pain is either due to ovarian or nervous erethism, the actual attack being a neuromuscular storm in a series of organs imperfectly prepared to functionate, the exciting cause being often a catarrhal endometritis, though by no means always. For a disease of such varied relationships and bearings it is manifestly improper to practise the routine method of dilatation, which is irrational, rarely of permanent benefit, harsh, and often productive of dangerous results. The causation and pathology teach the need of therapeutic measures to improve the general health and nerve tone, and to combat the local congestions and catarrhs, if such exist; and the readiness with which these cases respond to such combined measures offers no excuse for resort to operations whose only *rationale* is a disproved theory. It surely does not need the many uncured cases that come under our observation to prove the impropriety of this operation, which produces the very lacerations so laboriously and expensively sewed up after childbirth.

DANGEROUS OPERATIONS FOR BENIGN TUMORS.

A different reason applies to any opposition I may express to operations for the removal of fibroid tumors of the uterus. These growths are distinct deformities of the uterus, and, when large, are deformities of the person. Surgical operations for their removal are therefore proper enough, and the question becomes one of expediency only.

It has been amply demonstrated that all small fibroids, and solid and interstitial varieties of large ones, are amenable to arrest and retrogression by the use of the Apostoli method of electrical treatment. In my own experience this has occurred in seventy-six out of eighty cases, in seven of which the tumor disappeared entirely. The claims of this method in preference to the knife are, therefore, of very great importance, particularly when the large mortality of the operation is contrasted with the slight mortality of the tumors left to themselves, and when it is also remembered that a successful hysterectomy renders the patient sexless, and leads so often to a troublesome hernia at the site of the abdominal incision. Degenerating or suppurating tumors do not permit us to select any other alternative than the knife.

RESTORATION OF FUNCTION.

The highest aim of the gynæcologist should be the restoration of func-

tion, yet how seldom do we hear of this, in its broadest sense, being an ever-present consideration with the operator in gynæcology as it is practised. The cure of sterility, it is true, is frequently aimed at, but a reader of our most recent works on the diseases of women will make wondrous excursions into the realms of antiseptic surgery and abdominal section, will read of gross diseases and endless amputations as remedies, but will probably see no mention whatever of the analogous conditions and weaknesses peculiar to their sex, which surely women suffer from as well as men. The gynæcologist knows much of intestinal anastomosis and cholecystectomy, but nothing of maternal impotences. It is like the play of Hamlet without Hamlet. In these neglected fields lie some of the remote causes of pelvic disease, and many of the more trifling complaints which mar the conjugal and social life of women.

Dermoid Cyst; Broad Ligament Cyst; Vicious Union of Cervix with Vagina.¹

BY GEORGE ERETY SHOEMAKER, M.D.,

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THE following case presents an atypical history of a dermoid tumor.

CASE I.—The patient, an unmarried girl, was 19 years old. There was nothing in her childhood or early

menstrual life to indicate any abnormality. Menstruating first at 15, she was very regular and had no pain until within a few weeks of applying for treatment. A tumor was first noticed nineteen months earlier, soon after a fall. It was then on the right

¹ Read before the Obstetrical Society of Philadelphia, March 1, 1894.

side, as large as two fists and painless. Gradual enlargement took place until at the time of the first examination the abdomen resembled that of a pregnant woman near term. She had swelling of the feet in the morning, which disappeared during the day, no doubt owing to the pressure upon the vena cava being relieved by the sagging forward of the tumor when the body was upright. The uterus was very small and the cervix high up and flattened against the pubic arch. A thin-walled cyst distended Douglas's sac, while the main portion of the tumor was semi-solid to the touch. Another sac of thin fluid lay in the left hypochondrium. The patient returned to her home in New Jersey to consider the operation advised, and while there was thrown from a wagon, hurting her chiefly in the left side. This fall caused a disappearance of the thin-walled sac of fluid in the upper abdomen by rupture, but no harm followed. Operation June 17, 1893. The tumor completely filled the abdomen and no reduction could be made in its size by tapping. This made it necessary to prolong the incision two inches above the umbilicus in order to deliver it. The omentum was attached with great firmness to the front wall and required to be ligated off entirely as its vessels were large. Strong adhesions to colon on both sides and to small intestine were tied off or separated, and with difficulty the tumor delivered. The sac which had bulged into the vagina behind could now be emptied. It contained about one pint of straw-colored, thin fluid. The pedicle was not larger than two fingers. It was one of those growths where few adhesions are encountered in front except to the omentum, but

where strong, tight bands, almost out of reach behind, render the delivery of the tumor a matter of considerable difficulty. The solid part of the growth weighed six pounds. A loose band looking much like small intestine passed horizontally across the front of the tumor above the bladder reflection. It contained, however, two veins as large as lead-pencils and led directly to the side of the uterus below the round ligament, which was itself hypertrophied and very distinct. It probably belonged to the ovarian ligament. Left ovary cystic, size of two walnuts. Left tube had a rounded end with no fimbriæ, and as it was completely buried with the diseased ovary in strongly-organized adhesions both were removed. Flushing. No drainage. Buried silkworm-gut sutures. Aseptic recovery. Up in three weeks. Reported herself well and working six months later with no symptoms.

CASE II.—M. A., 36 years old; married. Broad ligament cyst. One child 16 years old. No miscarriages. Applied for treatment because of pain in the back and right side, which had lasted five months and was increased by walking, working, and lying on opposite side. She had had no attacks of peritonitis. Menses began at 14 years, and had been normal up to the time of the beginning of pain in back five months before, since which they had appeared every three weeks. Examination disclosing a thin-walled cyst of the size of a child's head in the right pelvis; operation by median three-inch incision was performed September 17, 1892. The cyst dissected up the posterior fold of the broad ligament and peritoneum nearly

to the anterior superior spinous process.

The hypertrophied tube lay closely applied upon its anterior face, looking like collapsed small intestine. The corresponding ovary was beneath and in front. After tapping and removing about two pints of thin, clear fluid, it was possible to enucleate the cyst and tie off its base completely. There was no pedicle. The left tube and ovary were normal and were not removed. There were no adhesions. Abdomen closed without drainage. The convalescence was normal and without incident. Patient seen and examined after sixteen months. She was well, having no symptoms and no return of the growth, nor was any thickening palpable on the side operated upon.

CASE III.—Vicious union of cervix with vaginal wall. Mrs. X., aged 30, applied for the repair of a severe laceration of the cervix as well as of the perineum. The only peculiarity

of the case consisted in a round band or cord of connective tissue, about half the size of a lead-pencil, which began at the outer angle of the cervical tear and extended downward a little more than an inch to the right vaginal wall, where it was attached to a small area of cicatricial tissue. The presence of this scar-tissue at both attachments of the band leads to the following theory as to its causation: After the labor, at which a tear both of the cervix and vaginal wall occurred, the two torn surfaces were held in contact long enough for union to take place. A loaded bowel may have crowded the uterus down and to the right. As involution occurred and the normal movements took place to which the uterus is subject, including probably the influence of coition, stretching of the tissues resulted in the formation of the band. The occurrence of vicious union of the cervix after labor, though not very common, has been repeatedly described.

Hysterectomy for Myoma of the Uterus.¹

BY R. S. SUTTON, M.D.,
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THE specimen was removed on the 8th inst. The patient, aged 32, single, entered the hospital on January 8, considerably run down. She was put to bed, given good diet, daily salt friction, strychnia, quinine, and iron until forty-eight hours before operation. Her bowels were then cleared out, baths and hot douches

were begun, and at the end of forty-eight hours she was operated as follows:

Chloroform; Trendelenburg posture, high elevation; incision four and a half inches; uterus pulled out. A heavy silk ligature armed with a needle was passed through the broad ligament on left side far below the ovary and tube and firmly tied; one long end of the ligature was again

¹ Read before the Obstetrical Society of Philadelphia, March 1, 1894.

armed with the needle and passed around another and deeper section of the broad ligament, keeping very close to the uterus. The ends of the ligature were again tied very firmly. The first loop got the ovarian artery; the second, the uterine artery. A pair of long-bladed hæmostatic forceps were secured on the uterine side of the ligatures, and the tissues were divided parallel with the forceps down to a point about opposite the internal os uteri. The same performance was carried out on the right side of the uterus. The uterus was lifted up and inclined backward. A knife divided transversely the peritoneum on the front of the uterus; this was pulled down to the vaginal attachment. The uterus was inclined forward and the peritoneum on its posterior surface was divided transversely and pulled down to the vaginal attachment. The uterus was drawn upward and inclined backward and the vaginal attachment was divided with the knife. The index finger of the left hand was slipped into the vagina under the cervix and pressed against the vaginal attachment behind it; this was divided with the knife against the finger as a guide. The knife was made to follow the cervical tissue as closely as possible, and a glance at the specimen will show that it looks as if a shell of cervical tissue had been left in the patient. The opening into the vagina was very small. On its circumference were several bleeding points (four). They were ligated with silk. A pair of forceps passed through the vagina seized the long ends of the ligatures and drew them out at the vulva. These ligatures slightly drawn upon everted from the pelvic side the edges of the

vaginal wound. A needle armed with catgut running suture closed the pelvic end of the open vagina by approximation-flaps of peritoneum turned off the uterus. The same suture closed any gaps in the peritoneum to either side of the opening into the vagina. The cavity of the peritoneum was left absolutely clean, the abdominal wound was closed, and the patient was put into the lithotomy position. A perineal retractor was put into the vagina, which was then irrigated with hot water, containing a little boracic acid in solution. The vagina was lightly filled with iodoform gauze.

The patient is now in the second hour of her fourth day. Pulse 80; temperature $99\frac{1}{3}^{\circ}$ F. She is feeding well, sleeping long, and is in all probability out of danger. The patient whose specimen was exhibited at the last meeting has gone home well. In undertaking a hysterectomy, I never decide, until I open the abdomen, what operation I will do. I had hoped only to remove the ovaries in this case, but I could not get at them until I pulled the uterus out with considerable force. The vulsellum tore the uterus enough to prompt me to take it out rather than leave it in with a wound on its surface.

Within a year I have used the elastic ligature, pedicle outside; have tied the neck with double ligature, as in ovariectomy, and dropped it; have taken out the entire uterus; have left the neck in, but under the peritoneum, and all of the cases have recovered. My opinion is that we want no hard and fast rules; let each case prompt the operator to do his best in his own way. There is no rule of three for good surgery.

Presentation of Specimens.¹

BY DR. JOSEPH PRICE,

PHILADELPHIA.

MRS. W., aged 31. Married. No children. Never pregnant. No history of uterine or ovarian disease; living the life of an active house-keeper. No soreness or pain upon locomotion or pressure up to a period of ten days antedating the operation.

She experienced some discomfort, and consulted her physician in regard to slight pelvic discomfort and failing general health.

Upon examination her physician found distended tubes on both sides, completely filling the pelvic cavity, universally adherent and most marked on the right. He asked for consultation. We agreed as to the nature of the trouble, and urged its early removal.

Section February 26, 1894. Omentum adherent to uterus and suppurating tubes. Small bowel adherent to pus accumulations. Omental and small-bowel adhesions freed. Huge pus-tubes enucleated.

Ovaries also firmly adherent. Sigmoid firmly fixed to uterus and right pus tube.

A sloughing, disorganized point, about the size of a silver quarter, strongly adherent to a perforated point of tube. The sloughing, perforated bowel was carefully scraped with a knife, ragged margins trimmed with scissors and sutured.

Irrigation and glass drain. The ab-

solute freedom from pain and recurring attacks of pelvic peritonitis are interesting in the history of this case. They are commonly so prominent in the natural history of such cases that we are surprised at so much virulent trouble without symptoms.

The extent of suppuration in this particular case is not uncommon. We have fully twelve inches of pus accumulation. At points the tubes were at least one inch in diameter. In this case, with many others, I could easily demonstrate the danger of vaginal puncture or incision: it would have been impossible to incise both tubes without incising the adherent and disorganized sigmoid adherent low down and fixed between the two tubes. A vaginal fæcal fistula would be an unfortunate accident in such cases.

Operators contending with large numbers of pus cases are constantly reminded of the importance of thorough and complete removal of all forms of puriform pelvic disease.

Tinkering from below of any character is not surgery, nor should it be tolerated by an enlightened profession. In just such cases the removal of the uterus has been recommended. I have given this subject almost daily reflection at the operating table, and failed to see the wisdom of such surgery; the uterus has long since ceased to have anything to do with the tubal and ovarian suppuration. As a rule, it is the healthiest organ

¹ Read before the Obstetrical Society of Philadelphia, March 1, 1894.

remaining after the operation. We commonly find adherent and diseased omentum, large and small bowel, the lymphatics, kidneys, liver, and lungs, in some cases, have taken up the infection.

The removal of suppurating tubes and ovaries, freeing of all adhesions, and repairing of all lesions of small and large bowel give perfect results in timely operations. But little silk is necessary for ligating,—fine pure silk is the safest and the cleanest material for all purposes. Flushing with a funnel-irrigator is of great value, and nothing cleanses so thoroughly and quickly. Drainage in angry pus cases is of paramount importance. To demonstrate the value of irrigation and drainage, I desire to allude to some work done since July, 1893. A series of sections, mixed in nature, about all complicated, but few simple, covering about every known tumor and variety of pelvic disease,—cystoma, hysterectomies, pyosalpinx, and ovarian abscess, appendicitis, tubal pregnancy, a consecutive series of 111 cases, with two deaths. I lost Miss V., October 26, 1893, a malignant and hopeless case. I could have refused operation. The other case I lost was that of Mrs. S., aged 34, an invalid for ten years; had been carried up and down stairs by her husband for nine years; dying of suppurating tubes and ovaries; three huge pus accumulations. An ovarian abscess of the left side opening into the bowel, scant secretion of urine before operation, her limbs and face puffy; the operation was difficult; adhesions universal and well organized. After the operation she did well, except the scant secretion of urine, two and three ounces daily for the first four days. She died the fifth

day from total suppression, August 10, 1893.

This series of sections beautifully demonstrates what can be done by painstaking surgery, good nursing, clean environs, absence of plumbing, etc. While alluding to this series I desire to refer to abdominal surgery in colored women. I have repeatedly alluded to what colored women have done for gynecology.

Again, to their wonderful tolerance to abdominal and pelvic surgery, they are the most satisfactory and most grateful patients I deal with. They bear heroic surgery better than any class of Anglo-Saxon women. It is exceptional that I lose a colored woman. The mortality has varied between *nil* and 3 per cent. for twelve years, the last series including eleven hysterectomies. I lost two in fifty-two sections. They always do best in a private hospital; there they never fret or worry about their husbands, children, or homes; are hopeful and cheerful, and co-operate with physician and nurse.

Mrs. G., aged 36. Two children; twins. Complicated labor. Lacerated perineum to sphincter, followed by complete procidentia.

Uterus large, cedematous myoma of fundus, cervix lacerated, and tumor about the size of an infant's head above filling pelvis.

The vaginal method of removal was preferable, and easy for the removal of the uterus, and also the cyst. The prolapsus was simply that of the cervix and anterior and posterior vaginal wall, the myomatous fundus was inside, and required some traction and dissection for its delivery. The right ovary contained a small cyst about the size of an egg, the left was multi-

cystic, two small sacs containing clear fluid, the third a pure dermoid. Contents hair, sebaceous matter. Some friable adhesions about the dermoid.

She had been a free bleeder, losing large quantities of blood at irregular intervals, independent of the regular periods.

The constant leakage of blood made it impossible to improve the quantity and quality of her blood, the anæmia remaining prominent. Marked anæmia in such cases strongly predisposes to heart-clot, etc.

HOSPITAL STATISTICS (WHITE).

Hysterectomies	18
Tubal pregnancy	2
Pyosalpinx	28
Mixed conditions	21
Dermoids	1
Cystoma	11
Hydrosalpinx	14
Removal of appendages for fibroid	8
Twisted pedicle	3
Visceral adhesions	4
Appendicitis	1
Total	111

One of the most important points

to settle is as to when to operate. She is now in her fourth day, without a hitch in her convalescence to this point.

One hundred and eleven operations with two deaths, from June 13, 1893, to February 15, 1894.

First death in the series Mrs. S., August 10, 1893. Suppression of urine. Second death Miss V., aged 56 years. Sarcomatous tumor of right ovary. General invasion and universal adhesions; hopeless. Extensive bowel stitching. Died October 26, 1893.

In a series of fifty-two sections done upon colored women I lost two.

HOSPITAL STATISTICS (COLORED).

Sarcoma of uterus	1
Pyosalpinx	19
Hydrosalpinx	6
Mixed conditions	9
Hysterectomies	11
Removal of appendages for fibroid	4
Cystoma	1
Ventral hernia	1

Total 52

Appendicitis.¹

BY J. C. IRISH, M.D.,
LOWELL, MASS.

ALTHOUGH our recent voluminous literature on the subject has thrown a flood of light upon this affection, before obscure and usually unrecognized, there are still some questions of diagnosis and treatment that are not very definitely settled. To the

discussion of these from the practical stand-point of the physician and surgeon the scope of this paper will be limited.

Following entirely my own experience with this disease, I would divide cases of appendicitis into three classes, very distinct and widely separated in their course and treatment:

¹ Read before the Gynæcological Society of Boston.

(1) Inflammation of the appendix without perforation.

(2) Appendicitis with perforation, the septic focus being walled off from the general abdominal cavity by agglutinated coils of intestine and lymph deposit.

(3) Appendicitis with perforation not walled off, and in which the general abdominal cavity is invaded by sepsis,—in other words, a diffuse septic peritonitis.

First Class.—This classification, I know, would be subject to a very sharp criticism from the stand-point of the pathologist and bacteriologist, yet for a simple practical study of the disease, the division into these classes seems to me very serviceable. By the non-perforating cases I mean those that are not followed at any time by perforation,—that is, in many instances we have inflammation of the appendix, in which at first there is no necrosis, therefore no perforation, but the perforation occurs later on in the disease. These cases, of course, are not included in the first class.

Without attempting to explain the cause, we must all admit the fact that there is a large proportion of cases of appendicitis of the first class I have mentioned. I mean cases in which the appendix becomes inflamed, and which present the same symptoms as those of appendicitis that go on to perforation, but which gradually get well without the occurrence of necrosis, at least of the appendiceal muscular wall. Symptoms in the beginning of the attack differ in no way from those attending the perforating cases. We have the sudden attack of extreme pain, located usually in the right iliac region, exceptionally diffuse over the abdomen. Directly following

the pain, rise of temperature and acceleration of pulse; usually the whole abdomen becomes somewhat distended, with more or less tenderness over the entire abdominal walls; and the onset of the pain is soon followed by vomiting, and generally within twenty-four hours a well-marked dulness appears near the cæcum, and oftentimes a well-defined tumor. The general abdominal symptoms measure accurately the amount of irritation of the peritoneum that the inflammation of the appendix has produced. In fact, we have what would have been considered formerly a typical case of peritonitis, which was so often supposed to be cured by the opium treatment. In some cases the cæcum becomes so distended with gas as to greatly obscure the dulness in the vicinity of the appendix. Within twenty-four hours after the attack McBurney's point of tenderness will be found. From my own experience, however, I would locate that point about one inch nearer the anterior superior spinous process than the umbilicus.

In examples of the first class after two or three days the most acute symptoms begin to subside, the pain becomes less or disappears; the distention of the intestines abates; the bunch in the right iliac region becomes less pronounced; vomiting ceases; the temperature descends towards the normal, and the patient goes on to recovery.

In the majority of cases the patient has a single attack, while in others the attacks from time to time are repeated, and the case becomes one of recurrent appendicitis. In any given case it is impossible at the beginning to distinguish between the

perforating and the non-perforating attacks.

Any conclusion based upon the severity of the onset of the affection will be uncertain and often misleading. Quite as often we have extreme spasmodic pain, high temperature, and as well a marked plastic effusion around the appendix in the one as the other.

While at first we are unable to make this differential diagnosis, time very speedily comes to our assistance and the progress of the case soon indicates with reasonable precision whether we have a simple inflammation or a necrosis of the appendix. This question will best be considered in connection with the treatment of cases of the second class,—viz., perforating appendicitis. With the exception of recurrent cases the treatment of non-perforating appendicitis only indirectly interests the surgeon, for it is entirely medical, or at any rate should be.

At the beginning of the attack we are in the presence of pain so severe, usually, that morphine is our only recourse. Mischievous as it is, we cannot, in the first twenty-four hours, in any way I know, avoid its use. The severe spasmodic pain with which the attack commences, as a rule, measurably subsides within the first day; then we can avoid its further exhibition. For the employment of opium I would lay down this one rule: Use as little of it as possible and for the shortest possible time.

In all cases we have more or less inflammation of the peritoneum, accompanied with distention of the bowels and a paralysis exactly in proportion to their distention. The great objection to opium is that it simply

encourages that condition of distention, and when they are distended, just so much the diagnosis and the exact character of the affection is obscured. Thus does the opiate do harm, and the longer it is continued the greater the harm becomes.

Immediately after relief of the severe pain the remedy I would choose in preference to all others is calomel. The almost immediate effect is to relieve the bowels of distention, and a large part of it, the moment they have moved, will disappear. In fact, it will often be found to give more complete relief to pain than even the morphine itself. You may think it a very curious claim that calomel will sometimes relieve pain in peritonitis with distention better than the opiate. The reason for this is that it relieves the bowels of the gas that is distending them, thus removing the cause of the pain. Many have advocated the use of salines instead of calomel, but I prefer the latter for these reasons: it often relieves vomiting, while salines occasionally increase it, and it very speedily relieves more or less the intestinal distention, I think, much more completely than do the saline laxatives.

It is entirely agreed that all forms of appendicitis are a disease of sepsis; a sepsis by no means confined to the appendix, but affecting the contiguous and continuous portions of the intestines and the peritoneum throughout its entire extent, and it is certainly very possible that some of the benefits we receive from the use of calomel may be due to its antiseptic properties. As an illustration of the wonderful relief that calomel sometimes gives, I will describe briefly

the following case which I saw a few weeks since.

The attending physician wished me to see with him a little girl, 8 years old, suffering from appendicitis. The child had then been sick three days. The attack commenced very much as I have described above. The patient's temperature was 102° F., considerable abdominal distention and occasional vomiting; the apparent dulness in the right iliac region was quite extensive, though not very clearly defined. I believed this to be a case of the second class, appendiceal perforation with a very considerable pocket of matter around the appendix. Immediate operation was advised, but was deferred until the next day. Previous to my visit the patient had received 1:12 grain of morphine every four hours, administered with religious faithfulness, but it had failed to relieve the child, and the little patient lay there tossing on the bed with constant restlessness, parched hands and lips. In fact, the whole aspect of the case was most serious. I suggested to the doctor, awaiting the operation, that one grain of calomel be given each hour until a movement of the bowels had occurred. The next morning upon our visit I found that the child had had several movements, the distention was gone, temperature was normal, and the patient had slept quite well during the night. The extent of dulness in the right iliac region had largely diminished, showing that the greater part of what seemed to be a pocket of pus was really the cæcum distended with fæces. From this time the patient went on to a complete recovery, and has since had no return of the difficulty.

I relate this case because it is the exact parallel of several others that I have seen, and goes to show the great value of the treatment I have indicated, both in regard to relief of pain and the assistance that laxatives afford us, in aiding a precise diagnosis.

We have many cases of recurrent appendicitis both with and without perforation. The treatment for each form is the same,—namely, operation. While an operation may not be so urgently demanded in recurrent cases of simple inflammation, as in the perforating forms, still the disease in each case is always an impending danger, and by it patients are rendered to a greater or less extent invalids. They, therefore, alike demand relief by surgical procedure. Very much has been said in advocacy of operating in the intervals between the attacks,—in the quiescent period of the affection. I have operated both in the intervals and at the time of acute exacerbation, and I know of no good reason why one time rather than the other should be selected. The difficulties and dangers are much the same.

Most instances of recurrent appendicitis with perforation present one very interesting peculiarity. The appendix with its perforation, and the foreign body which is sometimes found within the necrosed appendix and sometimes outside of it, is wrapped and bound down by firm and close adhesions. Occasionally, too, it is enveloped by a fold of omentum,—usually no pus is found. The explanation has been offered that in this case the so-called foreign body is inspissated secretion of the appendix itself. It is undoubtedly true that the latter carries with it no such vio-

lent septic infection as attends the faecal concretions that are so often found.

In dismissing the matter of recurrent appendicitis it may be said that all these cases demand operation, either in the interval or at the time of an acute attack, and it makes very little difference which.

Second Class.—Appendicitis with perforation, the septic focus being walled off from the general abdominal cavity.

As I have said before, at the commencement of the affection it is impossible to distinguish the second class from the first. It is probable, too, that then no real distinction exists,—that is, inflammation of the appendix may have existed a certain time before necrosis with or without perforation occurs; but after the severe initiatory pain of the attack has subsided and the bowels have been thoroughly evacuated, if no perforation or necrosis has taken place, the general condition of the patient begins to improve. The temperature diminishes, its variations become less marked, and the tumor less prominent and distinct. On the other hand, if perforation has occurred, the effusion becomes larger and better defined, and if pus in any considerable quantity has formed the variations in temperature will be more marked. There will be often profuse perspirations, although this symptom is frequently entirely wanting. On the whole, the general aspect and appearance of the patient will have become worse. Almost invariably, even when there has been a small formation of pus, the abdominal muscles will become very rigid and firm. Sometimes, too, all the muscles of

the abdomen will present the same spasmodic rigidity. They will offer a resistance so great to external pressure that it becomes very difficult to trace the pocket of effusion beneath. In general, this rigidity of the abdominal muscles always indicates the existence of pus somewhere in the abdominal cavity. In any case of doubt in regard to the exudation, by the administration of a little chloroform the muscular spasm is entirely overcome and the necessary examination satisfactorily made.

I regard this as a physical sign of the greatest diagnostic importance. In the management of a case of appendicitis it is at once apparent that this question of diagnosis between the simple and the sloughing inflammations of the appendix is the one most important and most difficult to determine. It is most important because upon its answer depends our choice of treatment,—viz., letting the patient alone or removing as speedily as possible the diseased appendix. It is difficult of solution because many examples of the affection are very atypical in their course and termination. The unexpected too often happens for us to watch a case even three days with any feeling of security. If we wait long enough, time always settles the diagnosis, but too frequently by the loss of a life that might have been saved.

It is, therefore, much better to make our diagnosis early between the first and second classes, even at the risk of some mistakes. In any case of doubt, if we operate on a simple appendicitis where we had expected to find perforation, the chances of harm to the patient are infinitely less than when we make the opposite

error of waiting for a sloughing appendix to get well, in the belief that we are watching a case of simple inflammation that will end in resolution.

So much depends upon this question of differentiation that it may well be worth our while, even at the risk of tedious repetition, to summarize the few diagnostic aids we have.

In cases of the first class, after the initiatory pain has been measurably controlled and the bowels evacuated, the general condition of the patient begins to improve. The bunch in the right abdomen becomes appreciably less and less defined; the abdominal walls are soft and compressible.

On the other hand, in the second class the condition and general symptoms of the patient will become worse,—the tumor will somewhat increase and become more distinct, and the tenderness more marked. The right abdominal muscles will show a firm rigidity. It must be acknowledged that these are not very precise differential signs between the two classes; still, taken together, they will lead us usually to accurate conclusions as to the kind of appendiceal inflammation with which we have to deal.

Several observers, notably Dr. Worcester, of Waltham, have advised immediate operation in all cases of appendicitis, without making any attempt at separation of those which would recover without operation. They have considered the uncertainties and dangers of the disease in its progress so great as to demand immediate surgical interference in every instance. I can hardly assent to this proposition, because I am certain that much more than one-half of the cases of appendicitis are of the first class,

and will fully and permanently recover with medical treatment alone. Again, by delay of three or four days we become reasonably certain, in a majority of cases, whether we have to deal with a simple or perforating inflammation of the appendix. While it cannot be denied that this delay is attended by some danger, still, on the whole, it will not be so great as that which follows the removal of the appendix, even in very simple cases. Although with our aseptic precautions we may open the abdominal cavity with great impunity, still, we must remember that this operation necessitates oftentimes a very patient search for an inflamed appendix, which may lie almost anywhere it pleases, and is often embedded in plastic exudations. It is entirely evident that an operation of this magnitude, however carefully and aseptically done, must always be attended by a certain percentage of fatality. I believe that the danger of the brief delay which I have recommended is far less than that which attends the operation.

Whenever perforation or sloughing of the appendix occurs, it is then that the formation of an abscess begins. The preceding inflammation has already excited a plastic peritonitis that has made the dividing wall between the invaded locality and the general peritoneum. The exception to this order of things constitutes the third class, which we have yet to consider. The amount of pus in the abscess gradually increases, but, as a rule, not very rapidly. The danger, therefore, that the partition wall would give way and the peritoneal cavity would be invaded by the effusion in the early progress of the disease, we would con-

sider as a remote one. Clinically such is the fact. I have never seen an instance. It is in the delayed and unrecognized cases that such danger becomes imminent.

Another complication that is much more frequent, early in appendicitis, and, consequently, much more to be feared, is a local gangrene of the cæcum with perforation. This accident, however, is much oftener a late than an early one. But in the face of both these dangers, I believe, the brief delay I have advised is safer than immediate operation in doubtful cases.

The treatment of the second class may be summed up in one very brief sentence: operate as early as possible, and remove the appendix when it can be found. The technique of the operation has been so frequently described that very little need be said on this subject. The varying conditions, however, in a series of operations for appendicitis are very instructive. By reason of them the procedure often changes from a comparatively simple one to one of the utmost difficulty. The pus-pocket is sometimes found on the outside of the cæcum extending up towards the liver, or down into the pelvis. In one case of operation I found a large amount of pus which had penetrated into the right scrotum; in another case a pocket of pus in the small pelvis, and another under the liver. Probably more frequently than elsewhere the abscess with the appendix will be found situated beneath the cæcum, and in other cases on the median side and below. In all these cases the appendix will best be reached and most easily found by an incision directly over the cæcum itself, that readily brings beneath our fingers

that important guide,—the anterior longitudinal band.

Exceptionally the appendix is found in the bottom of the abscess cavity, comparatively free from adhesions; oftener, however, at some point at the bottom of the cavity more or less bound down and obscured by adhesive bands. Sometimes it will be wrapped in a mass of unhealthy omentum. In many delayed cases the appendix will not be found, for the reason that the greater part of it has already sloughed off, and is lost in a mass of foul pus and exudation,—that is, nature has already performed the amputation for us. When this has occurred, usually the proximal end of the appendix has become entirely closed up, hence we have no fæcal fistula left. The operation then merely consists in opening and draining the abscess cavity. In cases of walled-off abscess the question has been raised whether it is advisable to make an extended search for the appendix when it is not readily found.

In my former operations, when I knew much less than now about a sloughing appendix, I always contented myself with opening the abscess, washing out the cavity and draining, giving no attention to the matter of the appendix. In no one of these cases, so far as I know, has any disease followed from this neglect of mine. With a little care and patience in this search, in the majority of cases, the appendix can be found and removed, and that, too, with very little danger of infecting the abdominal cavity. At any rate I now feel much safer when a necrosed appendix has been found and removed.

All cases of this kind require drainage. Whenever a pocket of

pus extends down into the pelvis, or under the liver, or deep upon the median side of the cæcum, I have employed glass drainage-tubes in addition to the gauze. In the smaller or more accessible pus-cavities the gauze alone is sufficient.

During the past two years I have operated upon fourteen cases of appendicitis of this class; twelve have recovered, two have died. One of the patients that died was a boy, 12 years of age; slender, frail, and scrofulous-looking. The attack had continued ten days. There was a pocket of pus in the small pelvis, another under the liver, while the main collection certainly reached the median line. In fact, the walled-off portion of the peritoneum was fully as extensive as the remainder. This patient died two days after the operation, apparently from simple exhaustion.

The other fatal case was a boy, aged 9. The appendix lay externally to the cæcum directly under the abdominal muscles and was surrounded by about one ounce of pus. The appendix had been perforated and two fæcal concretions were found in this small pus-cavity. The infected portion was absolutely walled off from the rest of the abdominal cavity. The operation was an extremely simple one. The boy died six hours after the operation. I made a post-mortem examination, but could find no reason for the unfortunate result. The rest of the abdominal cavity showed no disease, nor even any disturbed condition.

The only foreign bodies I have found in these fourteen cases have been fæcal concretions. In three of them the appendix was not found. These were all delayed cases, and

probably the gangrenous portion had entirely sloughed off.

Speaking of foreign bodies found in appendicitis. I imagine it is extremely rare to find any others than these I have mentioned.

Third Class.—Perforative appendicitis, not walled off, attended always by a diffuse septic peritonitis.

While this form of appendicitis may often be a sequel of the localized variety described above, and especially of recurrent cases, still, in my own experience, I have never met an instance of diffuse purulent peritonitis complicating the early course of an appendiceal inflammation that was walled off in the beginning of the attack. By the early course of the disease, I mean during the first three or four days.

It is proposed, however, in the somewhat arbitrary division of the subject that has been made, to include in the present class simply those of foudroyant appendicitis where the septic invasion of the abdominal cavity is so sudden and virulent that the peritoneum is entirely unable to defend itself.

The attack commences with extreme pain, followed at once by marked systemic depression. Vomiting of bile soon supervenes; peristalsis of the intestines ceases and they become rapidly distended. Of all the abdominal emergencies that occur, this is as formidable and rapidly fatal as any, except hæmorrhage. It goes without saying that the only treatment is the earliest possible operation, but unfortunately, however early that may be done, with rare exceptions, it will fail to avert or retard the unfortunate issue.

Dr. M. H. Richardson reports a

case in which he operated with fatal results six hours after the onset of the attack.

Within the past two years I have operated upon three of these cases of foudroyant appendicitis, as follows:

CASE I.—June 26, 1892. A little girl, 5 years old, previously well, had a slight attack of diarrhœa Friday, June 24, but was able to be out of doors. Saturday night had severe abdominal pains. Sunday morning, June 26, persistent vomiting, distention of the bowels, and spasm of the abdominal muscles. It was then that the attending physician first recognized a serious abdominal affection. The child was delirious, with high temperature and pulse. Abdominal section was made in the afternoon, and the abdominal cavity contained two quarts of pus. The child died eight hours after the operation.

CASE II.—August 11, 1893. Mr. P., aged 53, of Brookline, had slight attack of diarrhœa; drove four miles to consult a physician in the morning. Was about his summer residence during the remainder of the day. In the evening was attacked with severe pain in the right iliac region. The next morning, August 12, had vomiting of bile, distention of the bowels, and rigidity of the abdominal muscles,—in short, all the symptoms of acute obstruction. On the following morning, August 13, I removed a necrosed appendix with perforation; there was diffuse purulent peritonitis. About one pint of pus escaped from the abdominal cavity, which was thoroughly washed out and drained. Patient died four hours after.

CASE III.—October 30, 1893. Mr. T., aged 42, of Harrisville, N. H. A few days before returned from Chi-

cago suffering from a slight attack of diarrhœa. Severe pain, frequent vomiting of bile, distention of bowels, spasm of abdominal muscles, and abolition of intestinal peristalsis. On the evening of that day, twelve hours after the onset of these serious symptoms, I opened the abdominal cavity, which contained a turbulent sanguinolent serum in small quantity. Patient was so near the verge of death that I could not continue the operation to search for and remove the appendix, but had to content myself simply with washing and drainage of the abdomen. The intestines were extremely matted together. Patient died eight hours after the operation.

These three cases have all exhibited the preceding condition of intestinal irritation first shown by the diarrhœa. Whether this stands in any causative relation with the appendicitis or is merely an accidental coincidence, I do not know.

I have very briefly reported these cases simply as an illustration of the extreme hopelessness of this form of appendicitis, even when operated upon early. Certainly no one can consider any of the three cases mentioned as delayed cases.

Dr. Fenger reports eleven cases of this character in which he has operated with one recovery.

Dr. Richardson, who speaks with the authority of very great experience, is very emphatic in his delineation of the great hopelessness of this form of appendicitis, however early the operation may be done. Disastrous, however, as the results of our operative procedures have been, I believe that the operation should always be done in all cases where the condition of the patient is not des-

perate enough to make it entirely hopeless.

Occasionally one of these patients is saved. The septic infection may be of less virulent character than usually exists. Then, again, the disease has so many symptoms in common with acute intestinal obstruction that we may occasionally be in error in diag-

nosis, and instead of a sloughing appendix with its virulent sepsis we may find obstruction from bands, volvulus, or even intussusception. Then, notwithstanding the high rate of mortality that attends operations for acute obstruction, we will be dealing with a condition more curable than would be the case were our diagnosis correct.

Scanty Menstruation.¹

BY FRANKLIN TOWNSEND, JR.,

ALBANY, N. Y.

THROUGH the polite courtesy of our worthy President, Dr. Bendell, and Dr. Andrew F. Currier, of New York, I have been invited to take part in this general discussion on "Menstruation and its Abnormalities." That portion of the subject allotted to me being, "Scanty Menstruation," and, as naturally happens at these meetings, time for the reading of papers on all subjects must of necessity be limited, because of the vast amount of work to be gone through with during the session, I feel, that like the first portion of my subject the term *scanty* may well apply to whatever oral flow I may now make before you. As I understand it, scanty, like profuse menstruation, indicates one of the ordinary departures from what we all understand as characteristic of a normal or healthy monthly discharge of menstrual blood from the uterus, to any deviation from

which, the term "paramenia" might aptly apply.

One of the most interesting works on all the peculiar diseases of women-kind to me is that of Dr. Robert Barnes, of London, under whose tuition I had the opportunity of gaining much in an early training, which proved so beneficial to me in after years. This author classifies the subject of disordered menstruation under the one term "amenorrhœa," including deficiency of the flow. But it would seem to me that terms of this nature, like so many others we, as physicians, have to use in medicine, are inadequate to express that which we really mean. Many different conditions may exist that lead to exemplify one symptom to us, and this one much more prominent than others that are present; at the same time, this main *symptom* is that which attracts the attention of the patient, and which eventually causes her to seek medical advice. It must, there-

¹ Read before the Medical Society of the State of New York, February 7, 1894.

fore, become evident to us all that to thoroughly analyze our patient's condition and to discover if possible what are the associated phenomena connected with the case, as well as to what cause the most prominent symptom is due, becomes a part of our serious duty to discover.

With these preliminary remarks, allow me then to take up some of the various causes which seem to induce scanty menstruation, as a part of the general subject under discussion.

To my mind the most fertile soil to develop such a malcondition is to be found in the state of the blood, and by this I mean that when the blood-plasma is wanting in its normal constituents, and where the blood globules are deprived of their natural ingredients, both caused by malnutrition, the general body *must suffer*, and the term "chloro-anæmia" therefore has thus been given to express such a condition. As to this class of chlorotic patients there could be much said, more especially by the specialist in nervous diseases, and, as I write, I can bring to mind much of solid worth as coming from the pen of such men as Goodell and Mitchell, of Philadelphia, who, not only recognized the curious neurotic elements connected with such cases, but who also through this knowledge made application of the same by instituting a course of treatment which has availed much for suffering women.

Should we draw a comparison between the society woman of to-day, the humble, hard-working peasant, and the Indian squaw or stout Negroess from our southern latitude, it would be difficult to believe that all could have sprung from the same parent stem. Indeed, observation

goes far to prove that those of the female sex, who are not exposed to depreciating influences, can compete in strength and endurance with the men of their races. From such facts as these, logically reasoning, the human female, if properly developed and placed beyond conditions which might militate against her physical well-being, would in no degree be the inferior of the male. The present customs consonant with the age, in dress, exercise, and general hygienic details, seem to be the vice which tends to bring about this condition of "chloro-anæmia," with the result of a disordered menstruation and scantiness of its normal flow.

Long ago, Dr. Thomas A. Emmett pointed out the importance of not permitting young girls, who were just coming into maturity, to exercise their mental capacities at the expense of their physical capabilities. There is but little question that such advice was good, and instead of the young ladies of to-day being encouraged to engage in out-door sports, very few have had such opportunities, and I imagine that it would be wiser for them and their general health were they thus properly trained and instructed; want of air and exercise in deteriorating the blood, enfeebling the two great systems of the body, the nervous and muscular, should be properly classed as two of the most important factors as causes for many of the menstrual disorders of the day. The necessity for the proper maintenance of these systems must be recognized, and the "*mens sana in corpore sano*" surely becomes essential to a healthy condition. Girls of tender age are required to apply their minds too constantly to master studies

beyond their mental capacity, because of the so-called "progress of the times." The results from such training being a rapid development of the whole cerebro-spinal nervous system; precocious talent, refined and cultivated taste, etc.; but, on the other hand, comes as a result the morbid impressibility that implants itself upon the generative organs. And added to this class of such functional uterine morbidities, among which is to be placed scanty menstruation, would naturally come the subject of the improprieties in the manner in which women clothe themselves. I cannot do better than express, with Thomas, of New York, that the dress adopted by the women of our town may be graceful and becoming; it may possess the great advantage of developing the beauties of the figure; but it certainly is conducive to many menstrual troubles. The process of respiration is entirely done by the thoracic muscles, the diaphragm taking a most important part in the performance of this physiological process, the proper action of this function must therefore be interfered with by the current custom of tight lacing. "The habit of contracting the waist in such a manner, accomplishes what the surgeon does when he holds a broken rib in place by a snug bandage."

Thus come many troubles to the pelvic organs which lie in such close relation, and which must therefore partake of functional difficulties. In estimating the effects of direct pressure on the position of the uterus, its extreme mobility must be constantly borne in mind. No more striking evidence of this fact can be cited than that as proved by the use

of the "Sims speculum" in our usual examinations.

Other causes might be enumerated as giving rise to this form of disordered menstruation, as imprudences during the menstrual nixus, or after parturition, prevention of conception, or induction of abortion, etc. But time will scarcely permit of any particular discourse upon these subjects. Suffice it to say that they remain, unfortunately, as factors of causation, and I am afraid, before much improvement can be attained before their removal, a desire must first be cultivated in the minds of those who are the sufferers, and, as a rule, I regret to say that, in my experience, neither desire nor the appreciation of the importance of such a subject towards the requirement of physical excellence, sufficiently exists among the more refined and better class of the women of to-day.

Chloro-anæmia as a physiologico-pathological condition may and can well exist, resulting in scanty menstruation. As to climate and its influences upon this function (menstruation), one might say something, but the subject is so well known to us all that I shall refrain from speaking of it except to mention it as an additional cause of the malady in question. Serious disease of the kidneys or of the lungs, as well as many of the zymotic troubles so frequently encountered, are also to be regarded as contributing causes towards disturbing the normal function of menstruation, often bringing about a scantiness of the flow, and even at times causing it to cease entirely. Often a leucorrhæal discharge, at periodical intervals in women thus diseased, takes the place of a normal flux, which

subject has been thoroughly discussed by Dr. Currier, of New York, at different times before this Society.

In my experience I cannot say that I have met with other causes for scanty menstruation. It may be possible that many forms of uterine tumors, or other pathological growths connected with this organ, are productive of it, yet the most pertinent factors seem to me to be those as already cited, chloro-anæmia being the most prominent of all. With this in mind, therefore, it would seem to appear, from a purely physiological stand-point, that treatment should be directed towards correcting this condition so far as it is possible.

According to Virchow, chlorosis, or chloro-anæmia, is to be distinguished from leukæmia or leucocythæmia, in that the entire number of the blood globules is less. In leukæmia the colorless corpuscles seem to take the place of the red ones, and a true diminution in the number of the cellular elements in the blood is not produced. In chloro-anæmia the elements of both kinds become less numerous without the occurrence of any disturbance in the numerical relation between these different corpuscles. This brilliant pathologist goes on to say, further, that "anatomical observations indicate that the foundations of chlorotic ailments are very early laid, for the aorta and the larger arteries are usually, and the heart and sexual organs frequently, found imperfectly developed."

To originate a new function, to bring to perfection a hitherto unexercised power, must make great demands upon the physical strength, and often, unfortunately, these demands are larger than are compatible with its con-

tinued activity. Numerous instances must come to our mind where, after menstruation has become fairly established, chloro-anæmia suddenly and unexpectedly makes its appearance, suppressing either partially or completely the flow. In such cases emotion frequently plays an important part: jealousy, disappointments of various kinds, especially those offending the affections, the "*spretæ injuria formæ*," are often the immediate antecedents which eventually result in impoverishment of the blood. Naturally, in the treatment of such conditions as described, iron, as a remedy par excellence, is the first suggestion that appeals to the physician; and such may be true, but, I might add, only in its *timely and proper administration*, which requires more judgment than is commonly shown; and from clinical experience I can well agree with Barnes, that this drug is only tolerated after vascular excitability or irritability is assuaged; it *then* becomes readily assimilated. To bring about this result most satisfactorily is best done by the use of salines, and, I think, that the old preparation of the "liquor acetate of ammonia," when freshly made, fulfils the purpose most admirably. After the use of this or other salines, iron can be given with decidedly beneficial effects.

Electricity, too, as suggested by many, holds a most important place as a factor in the treatment of this disorder. Again I can agree with Dr. Currier's statement made before this Society, that I fail to see much benefit arising from the use of manganese in any of its various forms. Other drugs might be mentioned, all useful in their way, in the treatment of this malady, each one having its champion to sec-

and its merits, but time will not permit at present of speaking further in this direction.

To summarize, then, I would say,—

(1) That scanty menstruation is most usually the result of malnutrition in both young and middle-aged women, married or single.

(2) That the primary seat of this

trouble lies in the condition known as chloro-anæmia.

(3) Its treatment must be directed in an intelligent manner towards rectifying this condition.

And, lastly, that a persistent patience must be persevered in with the various forms of treatment laid down, if a permanent cure is to be expected.

SOCIETY PROCEEDINGS.

New York State Medical Society.

ABSTRACT of introduction to debate on menstruation before the New York State Medical Society, February 6, 1894.

ANDREW F. CURRIER, M.D., of New York :

The influence of menstruation is a possible factor in most of the morbid conditions to which women are subject between puberty and the menopause. Its importance has been more than ever appreciated since the development of the art of abdominal surgery. The evolution of animal life from the lower to the higher signifies increased complexity of structure and function. The differentiation of the genital organs in individuals of separate sex begins very early in the scale of animal life, and the functions connected with those organs become more marked as we ascend the scale. The phenomena associated with the impulse to reproduction are as clearly defined as any in the entire range of animal activity, and demonstrate the important relation which that impulse bears to physical existence.

Changes in behavior and appearance signalize its presence in the highest and the lowest animals; in the higher mammalia there is also a discharge of mucus, or mucus and blood, from the genital passage. In the apes and monkeys the discharge from the genital passage is periodical, and suggests menstruation. In women there is not only the reproductive impulse and the bloody discharge, but there are recurrences at regular and relatively frequent intervals. There may also be the reproductive impulse and impregnation, without the bloody discharge, almost immediately after the conclusion of a previous pregnancy, and there may even be the continually-recurring bloody discharge without the reproductive impulse. There has been much speculation as to the cause for the recurrence of menstruation at monthly intervals. Pouchet, Pflüger, and others have propounded theories in explanation. The ovulation theory seems reasonable in many cases, but is not of universal application. A satisfactory explanation is

yet to be offered. Menstruation is one of the evidences of womanhood, but not the only one. A woman who does not menstruate, or has never menstruated, is physically defective, but the defect is not necessarily irremediable. A woman who has never menstruated should not marry until the cause has been ascertained and, if possible, removed. Menstruation makes its first appearance at different ages in different parts of the world. There are many modifying factors, including climate, altitude, habits, race, national and family peculiarities. In this latitude it seldom appears earlier than the thirteenth or later than the fifteenth year. An analysis of 200 cases in the writer's records gave the earliest period as ten and the latest as twenty years. The average for the 200 cases was 14.5 years. No function of the body shows a wider range and variety of phenomena than menstruation, none is more frequently disturbed. This is probably due to the complex conditions of civilized life, for the variations are few where civilization is absent. Increase in the blood-tension is an almost invariable accompaniment of menstruation. The vessels of the endometrium offer the least resistance: hence the discharge of blood from this source. With the blood is mingled *débris* from the broken vessels, epithelium from the uterus and vagina, and glandular secretion. These are the products of menstruation. The duration of menstruation is subject to many fluctuations, and has almost as many types as the number of days which it consumes. A complete menstrual period includes not only the flow, but the *molimina*, or accessory phenomena,

which may precede the flow by several hours.

In the one-day type the blood is scanty and watery, and there is usually pain in various localities. It occurs in women with imperfectly developed genital organs, in those who are anæmic and physically weak.

In the two-days type the blood may be abundant and of natural appearance the first day, while the second it may be scanty and watery. Pain is usually present as in the one-day type.

In the three-days type the conditions as to flow may be quite natural and normal from beginning to end, the menstrual wave advancing to its maximum and then gradually receding. There may or may not be pain. Profuse hæmorrhage seldom occurs.

In the four-days type the conditions may also be quite normal as to flow, pain, and general or local disturbance. But there are also cases in which the hæmorrhage is abundant, the uterus being the seat of disease of greater or less extent. Pain is seldom a prominent feature.

The type which continues five to seven days is not usually so marked as the preceding ones. The last day or two are often marked by very little loss of blood. In some cases there is a cessation of the flow on the third or fourth day, then an interval of a few hours, and then another period of flowing, lasting one to three days. If the flow is profuse, lasting five to seven days, or longer, uterine disease of a more or less serious character is likely to be present. With women who are in robust health and without physical deformity, the discharge of blood may be the only intimation that anything out of the usual course is

transpiring; but with vast numbers of women in civilized life menstruation means not only a discharge of blood, but a multiplicity of attendant discomforts and annoyances, which may amount to intense physical or mental suffering. The unpleasant sensations, or *molimina*, are due to the combined action and reaction of the vascular and nervous systems, especially to undue vascular tension and congestion. Thus we obtain the well-known variety of sensations in the pelvic organs, liver, kidneys, stomach, intestines, brain, and skin. The mental function, digestion, secretion, and assimilation may also be sharers in the disturbance, and the statement of the far-reaching possibilities of menstruation for annoyance is sustained. This should teach us to be on our guard and anticipate, if possible, the evils which may arise, keeping the patient under the most favorable conditions possible before and during the entire performance of the menstrual function. The family physician should devote more attention than has heretofore been the custom to instructing those who are under his care concerning the precautions which they should exercise with respect to menstruation. The common errors and imprudence in that direction should no longer be allowed without his vigorous and persistent protest.

Dysmenorrhœa, its Causes and Treatment.

DR. HOWARD KELLY, of Baltimore:

The writer called attention to the fact that dysmenorrhœa is only the name of a symptom and not of a disease: he deprecated the tendency of

physicians to rest satisfied with naming the symptom instead of trying to find out the real nature of the malady. This might be one of the large variety of diseases of the uterus, tubes, or ovaries. The writer gave an analysis of 400 cases in which he opened the abdomen for pelvic disease: it appeared from this that 291 of these patients had suffered from dysmenorrhœa, while 109 had none. Of 238 other patients, who had some minor pelvic disease, 168 had dysmenorrhœa. Of all these patients a very large number had been treated for months or years for dysmenorrhœa, no attempt having been made to obtain a real diagnosis of their condition. The writer cautioned against the routine use of morphine for these cases, and insisted that if simple treatment adapted to relieve pelvic congestion did not relieve the symptoms, a thorough examination should be made. Especially he deprecated commencing a routine of local treatment in young unmarried women, and insisted that their condition could be diagnosed by an examination per rectum under anæsthesia. He heartily supported the opinion of the ancient medical philosopher, who, although his name is forgotten, has left behind the maxim which will endure for all time:

Magnum est crimen
Perrumpere virginis hymen.

Profuse Menstruation.

DR. CHARLES P. NOBLE, of Philadelphia: (See page 334.)

Scanty Menstruation.

DR. FRANKLIN TOWNSEND, of Albany: (See page 405.)

Irregular Menstruation.

E. W. CUSHING, M.D., Boston, Mass. :

In considering the question of irregular menstruation I find myself somewhat embarrassed by the limitation of my part of the whole question, for I must avoid treating of profuse menstruation on the one hand and of scanty menstruation on the other, while, to be strictly accurate, what is really menstruation is not irregular, and what is quite irregular is not menstruation. I find myself, therefore, occupying as it were a geometrical point, which has position but neither length, breadth, nor thickness: if, therefore, I am to consider the subject at all, I must trench on the province of all the other speakers, in spite of the adjurations of Dr. Currier.

In the first place we have to consider the irregularities which attend the establishment of the menstrual function at puberty. These are sometimes so severe as to demand active treatment owing to the profuseness of the hæmorrhages, but more often we are called to give advice concerning scanty, delayed, or omitted menstruation.

A certain amount of irregularity at this period of life as well as at the menopause is so common that it may almost be considered as regular, and it is only special cases which come under the care of the physicians. Where menstruation is precocious or excessive, it is well to consider whether the girl is leading a life as quiet and free from excitement as should be the rule at such a time; while, on the other hand, when the discharge occurs only occasionally and at irregular intervals, care should be taken to avoid

undue confinement in school and overstudy, and to enjoin such an amount of good food and exercise in the open air as a young girl ought to have.

It is obviously impossible within the limits of this paper to say anything more in regard to the treatment of the irregularities of menstruation, for, as stated above, the only treatment required is for profuseness or scantiness, for continuous duration or total absence of the flow, and all these questions are to be considered by other speakers: the only point left for me to consider appears to be the differential diagnosis between irregularities of menstruation and various other bloody discharges from the vagina which are usually supposed by the patients to be of a menstrual nature, so that for this reason the early stages of very serious maladies are often overlooked. First in frequency and in importance come the sudden and violent hæmorrhages at or about the menstrual epoch, or the total suppression of menstruation, due to inflammation of the uterine appendages, and of the fundus of the uterus: these attacks are usually attributed by the women to "catching cold," and sometimes this appears to be the cause, or perhaps we should say more properly the occasion which allows various infecting organisms to excite inflammation of the uterine and tubal endometrium. It is unnecessary here to describe further the long train of troubles which may follow such an attack of pelvic inflammation; troubles which are liable to be associated at all stages with irregular or painful menstruation.

Next in order we may consider the irregularities of menstruation associated with subinvolution of the uterus,

running on into fungous endometritis; usually in these cases all sorts of medicines have been taken without effect until some one makes a diagnosis and adopts the proper treatment,—as a rule, of a surgical nature.

One of the most important affections, of which irregular menstruation is a symptom, is extra-uterine pregnancy. This condition is certainly very much more common than was heretofore supposed, as is shown by the large number of operations which are now performed to relieve it. Probably a large proportion of cases of hæmatocele should also be considered as due to extra-uterine pregnancy. Now in almost all cases of this affection the first symptom observed is irregularity of the menstruation. It sometimes ceases entirely as in ordinary pregnancy, but more often it is diminished, or is missed once and returns afterwards, but not just at the regular time, or there is a more or less continuous escape of blood, often accompanied by discharge of decidual membrane, and complicated by pain, so that the patient does not know whether she is really pregnant or not. Of course in all such cases the diagnosis is of the utmost importance, and that being made, the proper treatment can be at once adopted.

During the middle period of a woman's life, especially if she is married and the mother of a numerous family, the rapid succession of pregnancies, with the various accidents and sequelæ of parturition, together with the care and labor of the household and the conditions and relations incident to married life, make a certain amount of menstrual irregularity so common that the women hardly

notice it or trouble themselves about it; and when there is sufficient loss of blood, or pain, to lead them to consult a physician, the diagnosis is the main question; and it certainly is the duty of the physician to find out what is the real nature of the affection, instead of simply prescribing ergot or hydrastis or some other customary remedy.

At any rate, if such medicines do not act promptly, and if inflammatory disease, or the condition or results of pregnancy, can be excluded, there is grave reason to suspect organic disease of some kind, such as fibroid tumor or cancer.

Although neither of these diseases is strictly limited as to the period of life in which it appears, yet we see myoma more often in women under 50, cancer of the cervix in women from 40 to 65, and malignant adenoma which degenerates into cancer of the body of the uterus, seldom under 50.

It would seem self-evident that the way to find out whether a woman has a myoma or a cancer is to examine her carefully and thoroughly; and yet I am pained to say that in many cases a great deal of time is lost, either owing to the refusal of the woman to submit to examination or to the neglect of the physician to insist on making it. Here, again, a certain blind faith in the power of medicine,—an easy routine,—or a want of appreciation of the importance of the subject, very often leads to the loss of much valuable time.

The diagnosis of myoma is not always easy. It is most apt to be confounded with hard inflammatory masses, with malignant disease of the fundus uteri, or with ovarian growths, especially adherent der-

moids, which displace the uterus. This is not the place to go further into the question of diagnosis, still less of treatment. As soon as the diagnosis is made, the supposed menstrual irregularity becomes the symptom of a definite disease, and can be treated accordingly.

If the failure to make an early diagnosis of a myoma is annoying, the failure to discover a cancer in its early stages is a disaster,—a neglect which is wellnigh criminal.

And yet how many lives are trifled away for want of a diagnosis! How many women are dosed for months for irregular menstruation without any examination! How many are treated for “ulcerations” for weeks, until the disease has spread so that it has gone into the lymphatics beyond the possibility of entire removal!

How many women, instead of consulting their physician, run about among their female friends and are assured that it is “only the change of life” which causes their irregular hæmorrhages. Nevertheless there is seldom any real difficulty in diagnosis of cancer of the cervix. If there is an old laceration, with ectropium and glandular growth of the cervical lips, the appearances may resemble carcinoma, and, on the other hand, the latter disease may for a time resemble or be engrafted on the former. Yet it is easy to scoop or cut off a piece large enough for microscopic examination, and, in fact, it may be accepted as a rule with few exceptions that where a piece of the cervical tissue can be scraped or broken off with the finger-nail the disease is to be regarded as malignant, and measures are to be taken at once in accord-

ance with the nature and gravity of the affection.

Somewhat more difficult of early diagnosis is malignant adenoma of the uterine body, which usually first makes itself known by uterine hæmorrhages, not profuse, but persistent. As this affection generally commences after the menopause, it would hardly be a subject for consideration here were it not for the fact that the women are prone to regard the bloody discharges as a recurrence or renewal of menstruation, and they are often, in fact, rather proud of the prolongation of their uterine functions. The diagnosis is by the microscope, after curetting; the cure is hysterectomy.

It must moreover never be forgotten in studying the causes of irregular menstruation that they may lie far from the uterus or its appendages. Thus, menorrhagia may depend on disease of the heart, on violence of the emotions, on sexual excitement, etc. Amenorrhœa may depend on imperfect development, on incipient phthisis, on homesickness, change of climate, anæmia, sorrow, etc.

It is impossible to do justice to such a subject in fifteen minutes, and, if I may sum up all in a few words, I would say that in all cases of irregular menstruation we should search out the cause of the trouble, and if possible remove it.

“*Sublata causa tollitur effectus.*”

The Menopause, Natural and Artificial.

DR. ARTHUR W. JOHNSTONE, of Cincinnati:

The writer attached a good deal of importance to Stevenson's wave as explaining many of the normal and abnormal peculiarities in the history

of the menstrual function. Dr. Johnstone expressed the belief, based on observation, that the ovaries had nothing to do with the menstruation; that the menstruation was dependent upon a small plexus of nerves, situated in the broad ligament in the angle at

the junction of the Fallopian tube and the uterus. He dwelt upon the importance, in the performance of oöphorectomy, of placing the ligature low enough to include these nerves, in order to prevent any further menstruation.

SOCIETY REPORTS.

The Gynæcological Society of Boston.

DR. JOHN C. IRISH IN THE CHAIR.

Regular Meeting, Thursday, January 18, 1894. Albert H. Tuttle, M.D., Secretary.

In place of the annual address, Dr. Irish read a paper on "Appendicitis." See page 396 of this journal.

DISCUSSION.

DR. STEARNS has seen three or four cases that have got well without operation. It is not long ago since opium was considered the only drug of great importance in the treatment of peritonitis. His experience seemed to demonstrate the value of cathartics in this class of cases. Turpentine stupes are of some value in relieving the pain and tympanites, and small doses of opium prevent excessive peristalsis. He had produced salivation by the use of calomel in abdominal cases, and was, therefore, very careful in its administration.

DR. HOGNER thought all cases of appendicitis should not be condemned to operation, as a great many get well

without. It is difficult to maintain our aseptic and antiseptic methods in intestinal surgery. The operation should be confined to cases with great tenderness locally, where there is evidence of suppuration. A case was reported where a large collection of pus formed, was evacuated, and good recovery followed. The secondary effects of appendicitis arise from the exudates, and are best treated with massage. In two cases where the diagnosis of appendicitis was made early massage treatment was of great benefit to the patient. The application of massage in these cases is somewhat difficult, as in other deep-seated organs, for instance, the uterus.

DR. V. D. MILLER had a case in a young girl of 7 years that was treated with calomel and recovered. She has had three other cases in her practice, all recovering without operation.

DR. J. P. ELLIOTT has attended four cases in his practice, one died the next day after operation, another was a recurrent type, and received benefit from the use of salines and bromide of potassium during the attacks, the others were simple cases that recovered without operation. The recurrent case was obliged to do heavy lifting, and go up and down stairs frequently, causes, perhaps, of the continuation of the disease. He thought the habit of biting and chewing fingernails could be classed among the causes of this trouble.

DR. WING said what puzzled him most was the question when to operate. One of his cases was in an old lady about 70 years of age; the pus was evacuated, and the remains of the vermiform appendix, in a sloughy condition, came away in a short time afterwards; there was no after-trouble.

DR. A. P. CLARKE regarded Dr. Irish's paper on appendicitis as one of unusual interest, and as one suggesting many points for inquiry. He regretted, however, that writers had so often reported cases of vague and undefinable intestinal disturbances as being certain forms of appendicitis. Many if not the most of such cases had been set down as having a favorable termination, though a simple or expectant method of treatment had only been employed. He thought that most of the cases embraced in this class should be stricken from the list, because the diagnosis from the symptoms observed could not be considered as even problematical. He thought the larger proportion of cases of true appendicitis, when treated without resort to surgical measures, had sooner or later an unfavorable

issue. He recalled the fact that the late Dr. A. F. Holt became much interested in the pathological condition of the appendix, and in his extended work as medical examiner had rarely if ever found any traces of disease of the appendix, except in those cases in which the symptoms had been unmistakably marked, and in which the affection was in whole or in part the cause of the fatal issue. He regarded the rigidity of the abdominal muscles referred to by Dr. Irish as an important feature in the consideration of a case, but he thought that when the initial symptoms do not subside within forty-eight hours, and an œdema or swelling occurs over the iliac fossa, the diagnosis of implication of the appendix may be safely affirmed. In the third class of cases in which there may be an intra-abdominal abscess or purulent collection, as mentioned by the reader, the diagnosis may be more difficult; in this class of cases immediate surgical measures are imperatively demanded. The dangers resulting from an abdominal section are much less to be dreaded than those that would arise from waiting to gain a more thorough diagnosis.

DR. MARY BATES had had four cases which she believed were appendicitis. Her practice was to prepare the patient for a surgical operation, and then feel her way, treating according to the symptoms that presented themselves, and ever ready for surgical interference should it be demanded.

DR. MARCY said, I operated upon Dr. Samuel Nelson in November, 1886, assisted by Dr. Allen, of New York, and Dr. Holt, of Cambridge, for appendicitis, about three weeks after his last acute attack. These had been several in number, and very

severe. The recovery was uneventful and permanent. At the time I could find no report of an operation having been attempted between the attacks, and my decision to operate was arrived at only after a mature deliberation. So far as I am aware, this was the first operation for appendicitis after the patient had recovered from the acute stages of the disease.

DR. A. H. TUTTLE said, a sudden perforation is liable to occur in any class of cases, and it is impossible to determine beforehand the probability of such an event. He has reported a case where the patient walked to his office, and yet when seen twenty-four hours later perforation had occurred, and the autopsy showed a simple perforating ulcer in the appendix, similar in appearances to the common gastric ulcer, which had opened into the peritoneal cavity, caused an exudation of serum and plastic lymph, with slight adhesions around the head of the great gut. This was a case of the foudroyant type, and, as the system becomes rapidly poisoned by the absorption of a lethal dose of the deadly bacterial product which is suddenly poured into the peritoneal cavity in these cases, the patient was doomed when seen at the second visit. The severe constitutional symptoms mark more than the simple perforation; they determine that a poisonous dose of the bacterial product *has become absorbed*;

and if the symptoms are severe, it is too late to operate. When a patient dies as a result of the disease or the operation, where no mistake or accident has occurred, and after an operation has been performed with the object of saving life, we must consider that the death of the patient is an indication of an error in judgment; and even if we have said there was but one chance in ten, the fact that we have operated determines that we have considered this patient *the one*, for no true surgeon would operate when he knew the patient would die, or even if he thought he would die. He considers that a simple opening to evacuate pus, with drainage, is all that is necessary in those cases where an abscess has formed, and the extra dangers of removing the offending appendix should be avoided. Experience shows that such simple treatment is all that is required in the majority of these cases for perfect recovery without recurrence. The extensive adhesions that remain after the opening has healed do not seem to cause the patient much inconvenience, probably because the gut is bound down *in situ*.

DR. IRISH, in closing, said that over half the cases of appendicitis got well without operation. In his last thirty cases, where he advised delay of an operation, all have recovered.

The Diagnosis of Intrapelvic Adhesions.¹

DISCUSSION.

DR. GEO. HALLEY, Kansas City :

This paper is exactly in the line of

real progression of both the physician and the surgeon. Such papers are real eye-openers to the class of men who we still find declaring, "I am not much on diagnosis, but I am boss on

¹ ANNALS OF GYNÆCOLOGY AND PÆDIATRY, March, 1894. See page 342.

treatment." I feel that all such men who are incapable of making a correct diagnosis intelligently should be drummed out of the profession.

The inspection of the passages and organs in the lower part of the body has been, and is still, too much neglected. I think the author of the paper has laid too little stress upon rectal examination with the finger. I feel confident that 90 per cent. of all the cases that have pelvic disorders can be correctly diagnosed with the finger in the rectum, with less pain and unpleasantness to the patient than through the vagina. It is true you cannot get quite so high up in the pelvis, but high enough for all practical purposes. You can easily reach the ilio-pectineal ridge, the uterus, tubes, ovaries, bladder, etc., quite sufficient to clearly learn their condition. The paper is a very timely one, and deserves the full attention of the profession. I have listened to medical papers all my professional life, and this is certainly one of the most timely, logical, and clearly-defined papers that I have ever listened to. Dr. Dewees has done very well indeed, his language clearly portrays the reality of the subject under consideration, his position is positive and intelligent, and his commendations are to be depended upon. Such papers are a pleasure to listen to, and when we old men can and do find such good food for thought and profit we should be grateful to that class of progressive young men, of which Dr. Dewees is a type, and consider ourselves well rewarded for our having come to this meeting.

DR. A. H. CORDIER, Kansas City:

This most excellent paper of Dr. De-

wees is certainly a sound production. It is timely, scholarly, and in the main, if not altogether, correct. It is both a pleasure and a profit to listen to such earnest words of truth. I must, however, take exception with him on the various positions which he advocates as essential to an intelligent diagnosis. I seldom use any other position but the dorsal. It is not so much the extent or kind of adhesions as it is pathological condition back of it, and which must be removed before you can cure your patient. I use only one finger, two never. The dorsal position, the index finger, and as little force or power as is possible. Most physicians make the mistake of using too much force with the end of the finger, and thus too often mar the very object desired. It is like the blind man reading with his finger the raised type, which he accomplishes best when he touches it very lightly. The history alone is very unreliable, and cannot be relied upon; it is the exception when you can do so. I must take issue with Dr. Halley in denouncing the general practitioner when failing to make a correct diagnosis. In this we all take our turn from time to time, even the specialist included. In the examination of girls I never make the examination through the vagina. The ladies have some disgust in being examined in some of the positions recommended by Dr. Dewees, and, consequently, difficulty will be encountered in enforcing these positions. Intestinal adhesions in the pelvis can be frequently diagnosed better in the Trendelenburg position, the incline being forty-five degrees, or even more. I will not consume more time, as this paper is such an exceptionally good one, presented

by a close-observing and reliable recorder, that scarce anything can be said but to commend it.

DR. M. B. WARD, Topeka :

The paper is an ideal one, brimful of facts to be relied upon. I would like to ask Dr. Dewees what special advantage there really is in introducing and keeping the finger with palmar surface backward, during the examination? Also the same with reference to the erect posture? I have never depended on either of these, consequently cannot speak for or against them.

DR. J. E. MINNEY, Topeka :

I have long ago recognized in Dr. Dewees one of the progressive men in the profession. But his paper to-night has convinced me more than ever before that he is possessed with a master mind, close-observing eye, and sound discriminating judgment. The spirit manifested in his paper, aside from its scientific value and progressive thought, to look well to the full training of the general practitioner, is what I call especial attention to. I am a specialist, and say that some of the worst mistakes that I have ever seen made in diagnosing, were not made by the general practitioners, but by these other fellows,—*the specialists*. Now, as general practitioners, I cannot see why they should not use every possible means to fully satisfy themselves. It is fact, undeniable, that those who go into a specialty are very liable to become limited in their views and ideas, just as their observations are made limited. I am inclined to think that, after all, the all-around general practitioner makes fewer mistakes, treats his pa-

tients more intelligently and successfully, than does the specialist. This is very forcibly brought to my mind to-night by this masterly production of Dr. Dewees, who, though he stands eminent and is favorably known in the profession, yet continues to prefer the humbler ranks of a general practitioner.

DR. HAY :

In view of the fact that Dr. Dewees has so fully brought to favor before these societies a much-neglected yet essential subject, I move you, Mr. President, that these societies, in joint convention assembled, do tender Dr. Dewees a vote of thanks.

DR. S. E. SHELDON, Topeka :

Dr. Dewees has given us to-night what he always has been known to bring when called upon,—namely, a most interesting and timely paper. He is one of the shining lights of Kansas, who reasons and thinks for himself, and is never satisfied until the light is clear before him. This is a subject entirely too much neglected by the profession to-day, and one that is worthy of due attention. Dr. Dewees has covered the ground so fully and clearly that there should be no misunderstanding his language. I feel unable to say anything by way of criticism, save to commend.

Dr. Dewees, closing the discussion, said: My first duty is to tender my most sincere thanks for the favor and appreciation with which this paper has been received. This the more so, as the attendance at this meeting is unusually large, and comprises the leading members of the two largest and most active medical organizations in Kansas. This gathering, it is to

be noted, includes some of the ablest active general practitioners, as well as specialists, and professors of this branch in three of the best medical colleges of the West. In regard to the discussion, let us first reflect upon the fact that *real wisdom is simply truth, and truth is always simple.* Dr. Halley's point is well taken and cannot receive too close attention, but it would certainly be erroneous to rely altogether upon rectal digital examinations. The examination made through the rectum becomes of greatest value when combined with bimanual manipulation, or, what I should prefer to call, the bimanual rectal touch. Dr. Minney, without doubt or cavil, has struck the keynote. This, of course, is a noted feature of his. There is no one of the profession in Kansas who has more earnestly and frequently sounded the tocsin of truth than has Dr. Minney.

Dr. Sheldon must not be passed by unnoticed, as he is one of the reverend fathers in the profession, and whom we shall ever greet with the right hand of fellowship in gratefulness.

Dr. Ward, I see, is waiting for the answers to his questions. The first and main reason for introducing and keeping the finger in the vagina with the palmar or flexor surface facing posteriorly is that it affords the best way in which to make a vaginal digital examination. We all know how objectionable it is, for reasons which need not necessarily be assigned here, to pass the finger over the mons veneris clitoris, and anterior commissure into the vagina; and the best way to avoid this is to enter the finger over the posterior commissure. Experience teaches that a far better intelligent survey of contents of the pelvis can be

taken through the vagina with the finger placed and retained in this position which enables you, if necessary, to gather up the perineal tissues and push them backward and upward and thus reach the highest possible point in the pelvis. It is to be remembered, however, that when such an effort becomes essential, that it is best secured by the elbow resting against the chest of the examiner, who will, by pushing the weight of his body against it, push the hand against the perineal tissues and thus press them forward and upward, leaving the muscles of the arm and fingers free from strain, and thus sensation of touch to the least impaired. With reference to the erect posture, I would have it recorded that, in my opinion, based upon my own individual experience, there is no posture wherein you can place the patient that will afford so much real information of the true condition of the sufferings from uterine disorders as the erect posture. Take the various degrees of procidentia, anteversion or ante flexion, or even prolapsus of the uterus, and is it not a fact that when you place the patient in either the dorsal or semi-prone postures, they will partly or wholly disappear? Take a pessary that will, to all appearances, fit perfectly while the patient is in the dorsal posture, but when she gets on her feet will utterly fail in fulfilling its purpose, which can only be intelligently seen when the patient is in the erect posture.

Dr. Cordier has spoken very well and clearly brought out some salient features. His remarks with reference to girls is, however, too sweeping. Let me illustrate this point. Only four days ago I was requested by two practitioners to assist them by giving

the anæsthetic to a young lady, for the purpose of curetting the endometrium. They have had the patient under observation for five or six months, examined and consulted together, and treated her locally for ulcerations of the os.

Two weeks ago they made another examination, and advised her to the operation. She readily assented, and the day was set as stated. I gave the anæsthetic as requested, while they placed the speculum preparatory to the proposed curettement, when, after referring to the horrible condition of the os, one of them passed the sound and pronounced the depth of the uterus to measure over five inches, remembering at the time that the sound passed that depth without any resistance. I was now asked to examine the conditions of the womb, and one of them relieved me for this purpose. Immediately upon seeing the os through the speculum I remarked that it had the appearance of pregnancy. Removing the speculum and making a bimanual vaginal digital examination, I became quite convinced of my suspicion. Applying my ear over the abdomen I discovered with unquestionable clearness the foetal heart-sounds, and so gave my opinion, stating that she was, in all probability, gone six months. It is

needless to add that the operation was not done, the girl being confronted with the fact on the day following, when she confessed that she believed herself pregnant about seven months, it being just that long since she menstruated last. The parents were notified, the young man summoned, and two days later the formal marriage consummated. This case illustrates the fact that we cannot at all times with safety hold even the girls exempt from thorough examination. That the history, while it is true, cannot alone be depended upon is always illustrated by this case, but, as a rule, it becomes a very material factor in guiding us as to our subsequent course, and can usually be brought out correctly if time and patience be taken. It certainly cannot be ignored and must receive its quota of attention if we would move intelligently. As to the objection referred to by Dr. Cor-dier, I find them no more when I propose the erect than the dorsal or any other posture. Once the confidence of your patient is obtained, endeavor to preserve the same, and always insist upon a third party being present during such examination, and there will be found ready acquiescence on the part of the patient in the erect as well as all other postures.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of March 1, 1894.

THE VICE-PRESIDENT, DR. J. M. BALDY, IN THE CHAIR.

DERMOID CYST; BROAD LIGAMENT
CYST. BY G. E. SHOEMAKER, M.D.
(See page 390.)

CERTAIN ERRONEOUS PRINCIPLES
AND METHODS IN GYNÆCOLOGY.
BY G. B. MASSEY, M.D. (See page
385.)

DISCUSSION.

DR. JOSEPH PRICE:

This paper should not go without a word of comment from the Society. In alluding to the history of gynæcology it would be well to remember a few of the facts, for instance, the labors of McDowell, Wm. Baynham, the Atlees, Clay, Baker, Brown, and other pioneers,—their labors and heroism in making possible our wonderful work. Again, we should remember Sims and his wonderful work, the character of the patients, and the troubles incident to parturition which he labored to cure. It was at the thirtieth operation without anæsthesia that he cured his first patient, notwithstanding his colleagues all deserted him. It is interesting to reflect on the courage of just such men, and it is fortunate for suffering women that many such men still live. At present, it is difficult to understand how an intelligent practitioner in the midst of an educational centre like Philadelphia, with the opportunity to see the work of his colleagues in Philadelphia, could offer such criticisms, or to live so far from Egypt and the Pyramids, and continue to plough his ground with crooked sticks. Criticism and comment of this character is harmful, and I speak of this point because such so-called conservative papers increase the mortality of every operator, and favor delays and procrastination that would

not be practised but for such articles. It is, perhaps, the very last three sections that I have done that make me speak in this way. To-morrow I have an operation to do on a woman whom I can hold on my extended hand. Her pulse is scarcely perceptible. She has suffered for six years, and at the eleventh hour she asks for relief. This is all due to so-called conservative utterances and papers. When I discuss such papers it is simply to lower my own morality, and to save the mortality of others and the lives of patients. I see large numbers of patients, feeble, ill, and dying, too far gone for surgery. We had a few weeks ago a *conservative* paper which will cost *five hundred women in America their lives* during the coming year.

As bearing on the character of troubles cured by palliative measures I shall simply show a pair of pus-tubes twelve inches long and an inch in diameter. We are asked to consider the propriety of the removal of such venomous pus conduits killing hundreds of our women. I scarcely think that there is an operator present who, if asked to give up either hysterectomy for fibroids, or the removal of pus-tubes, would not give up hysterectomy. With a fibroid the patient can linger along, living in misery, but with pus tubes there is only one termination. They about all die from secondary infection of other organs with numerous sinuses. They rarely get well by resolution or absorption. If Dr. Massey refers to operations for backache, globus hystericus, clavus, etc., we are not talking about that class of cases, nor do we think about them. All these operations are now done for actual and demonstrable disease.

With regard to laceration of the cervix. Emmett has called a halt in this operation himself. He states clearly that it was overdone; but the operation has a place, and it is

still practised by gynæcologists, and with benefit. Many cases are recorded in which the nervous phenomena have been clearly traceable to the laceration and scar-tissue. Sutton records a case of epilepsy due to the presence of scar-tissue, and after excluding everything else, he removed the scar-tissue, and cured the patient. A number of these cases have been reported by reliable operators. I cite these cases to demonstrate that these men are really clinicians,—they guess at nothing. Take the case of Dr. Neill, at Tacony, who told me that in his case he could put his finger on a certain point of the lacerated cervix and cause a fit. I demonstrated this at my own examination. Even under profound anæsthesia when I planted the tenaculum in this piece of scar-tissue she had a convulsion. All the scar-tissue was removed, and the woman has not had a fit since. Every woman with a little notch in the cervix does not need an operation. I might refer to the work of men in other departments, as, for instance, the rhinologist. He finds a little diseased point in the nose, and removes it with the cure of the patient. This is so in the practice of all specialties,—diseased organs are removed,—gynæcology is not an exception; nor are needless mutilation practised by diagnosticians or good clinicians. The general or country practitioner reasons by exclusion, and about always makes a diagnosis.

DR. G. BETTON MASSEY :

In my remarks, I was not alluding to globus hystericus, clavus, but to distinct local disease in the pelvis. I was alluding to such diseased conditions as were present in a young lady who was in my office a few days ago. Five years ago she had been advised to have her ovaries out. Nothing was done, and she got well in the course of a month or so. That case is enough in itself, particularly in view of the fact that no treatment was given. As to six inches of pus-secreting surface in the pelvis, I admit that that is a bad thing, and it is more than probable that removal is the best thing for such tubes. I submit that a better treatment, if possible, would be to cure the affection without removal. We have a great deal more than six inches of suppurating surface in typhoid fever. We probably have six feet, but we do not cure that by removal. I do not say that this is possible, but it is a thing to aim at.

PRESENTATION OF SPECIMENS. BY DR. JOSEPH PRICE. (See page 394.)

CONSERVATIVE SURGERY ON THE UTERINE APPENDAGES. BY J. M. BALDY, M.D. (See page 379.)

DISCUSSION.

DR. CHARLES P. NOBLE :

I have listened with a great deal of interest to the papers, for these are questions that are now agitating all operators. The question of conservative surgery in its proper sense is one of the most important questions which at present engages our attention. So far as the present wave of the advocacy of so-called conservative surgery is concerned, I find myself occupying very much the same position taken by Dr. Price and Dr. Baldy,—namely, that we now have a wave of hysterics on the subject. Of course, all these questions will be settled on their merits. They will not be settled in weeks or months. Gynæcology deals with facts, and whatever the facts are will be the solution of the question. All we want are the facts. I think that from that stand-point the present studies will be of value, for whether they demonstrate that the position which we take is right or wrong, it will, by demonstrating the truth of the matter, put gynæcologists in general on the right track, and that, after all, is what is to be desired, not that we are wrong or right, but that the right is demonstrated. I was glad that Dr. Baldy called attention to the results of Dr. Polk, for he is the one who is doing the most in this direction. The fact that he can say so little is a strong argument against taking up this line of work to any extent. I think that we have all done a certain amount of conservative work. I am now engaged in tabulating a list of operations in which I have left somewhat-diseased ovaries, or somewhat-diseased tubes, but I cannot state at present the number of cases, but, in general terms, I may say that my experience has been an unhappy one. I am now tormented by the visits of a number of patients in whom I was prevailed to leave ovaries, in the hope that they might become pregnant. In two cases were left a diseased ovary; the patients now have ovaries as large as a fist, instead of a baby, and a second operation will be required.

With reference to whether or not we shall make a closed tube patulous, personally I do not propose to do this unless the gentlemen who are following this line of work can demonstrate in a large series of cases that they get good results; that pregnancy results, and that the patients are cured. To my mind it is contrary to what our knowledge of the subject would lead us to expect, and so far as the results reported are concerned, I am not tempted to try this operation.

With reference to leaving a sound ovary or sound ovaries, where the tubes are removed, I have done this in a few cases, and I have had no reason to regret it. I think that this is especially desirable in young women, or women who have not borne children. The cessation of the menses in young women, or those who have not borne children, is certainly more of a change than if it takes place at the age of 35 years or 40 years, in women who have borne children. As a practical matter it is important among married women who have not borne children. If both ovaries are removed, post-climacteric atrophy takes place, and may be the cause of painful marital relations from atrophy of the vagina. Several times in my earlier cases I left pieces of the ovaries that could have been removed, but as it was early in my work I did not know how to get them out. In these cases no harm resulted. I have quite a number of cases including both of these classes.

I do not agree that all ovaries containing small cysts are normal. If pathologists and histologists say that they are normal, I would say that they cannot tell a normal ovary. I am convinced that a certain number of these ovaries are diseased, and the source of a good deal of suffering. We all know that there are normal ovaries studded with these follicles, and, unquestionably, it is a difficult matter to tell the difference between those that are normal and those that are diseased. I do not subscribe to the view that all moderately-enlarged ovaries, studded with follicles, are normal ovaries. There has been a peri-oöphoritis, and the reason that the cysts are present is because the cysts cannot break through the external covering. The tension becomes so great that the suffering is extreme. I have operated on a certain number of these cases, perhaps half a dozen, and the relief from the removal of these ovaries was complete.

DR. M. PRICE :

This conservative idea, I think, should be directed more towards diagnosis. The case referred to by Dr. Massey, where a young woman was told that her ovaries should be removed, is certainly not an isolated case. Scarcely a week passes without a woman coming to me and stating that she has been told that the ovaries must be removed, and where such operation is unnecessary. If our teaching and writing were directed especially to diagnosis, as to what can be found and what should be found before operation is thought of, these cases would be placed in their proper position, and the chance of some ignorant operator removing healthy ovaries would be less frequent. We should be exceedingly careful how we recommend certain things in our discussions here and in our papers. In one of our societies recently reference was made to removal of the testicle for the relief of enlarged prostate. Within a short time two such operations were reported by a single man. While I agree that a man has as good a right to be castrated as a woman, we should have some facts to show the good that is to come of such an operation before we accept it. What connection there can be between the testicle and fibroid enlargement of the prostate, I cannot understand.

If we propose to carry our treatment of disease into the same field of preventive medicine as is recommended in tuberculosis, we can, with the same honesty of purpose and the same honesty of opinion, hold that every man who has had gonorrhoea should be castrated to save the coming women from disease and devastation of their sexual organs, for this would probably prevent 50 to 75 per cent. of the deaths from pelvic disease.

We should be careful how we blame certain conditions on certain things. We constantly find men saying, without proper study of the case, that the ovaries and tubes should be removed. The woman consents and the thing is done. We see the same thing in appendicitis. In every case that should be operated on there is a condition on which the hand can be put, and unless that can be done, operation should not be performed. I have been called to operate on many cases of appendicitis, where operation was not required. When the necessity for operation exists any fool can

know it; but when it does not exist, the wisest may make a mistake, unless he acts on the principle not to operate unless he can put his hand on something to remove.

DR. JOSEPH HOFFMANN:

Both Dr. Baldy and Dr. Price have struck the key-note of operation. I am much in doubt whether any man who has never done abdominal surgery is capable of saying when it should be done or not done, just as one who has never done any surgery would hesitate to tell any one else whether he should or should not do an operation. The difference between general and abdominal surgery is that in general surgery the diagnosis is usually clear, while in abdominal work the diagnosis is often difficult. These gentlemen who rush into conservative surgery forget many things about the physiology and pathology of the organs with which they are to deal. Experiments in conservative surgery begin in doubt as to diagnosis, and end in a doubtful operation. Those who dilate tubes, resect them or attach them to the ovary, forget that often the simplest manipulation causes the most serious disease. In experiments made thirty or forty years ago, it was shown that the simplest examination of healthy tubes and ovaries might cause disease. The simple introduction of an instrument may cause disease. We are also told that simple change of temperature may cause serious disease. Bearing these facts in mind, we should not be surprised at the results which have been reported.

With regard to simple adhesions. We do not often find simple adhesions. We do not find the tube or ovary adherent without finding the fimbriated extremity adherent. This causes occlusion, and leads to deposit. We often in trying to save the organs of women, many of us, have saved an ovary or tube that was apparently healthy. I have in mind a woman on whom I operated for appendicitis. There was a great deposit of pus. There was also a hæmatoma. One ovary was left apparently healthy. There was a rupture on which I operated three years later, and at that time found the second ovary as large as my first. When one ovary is diseased it is the rarest thing for the second ovary not to take it up. That is especially true in fibroid disease, and it is one thing that makes vagi-

nal hysterectomy for fibroid tumors unsatisfactory, for in fibroid disease the ovaries are almost always diseased.

With regard to the contents of hæmatoma. I have in mind a case of simple hæmatoma, where within twenty-four hours there developed a most virulent peritonitis. The hæmatoma burst during the operation, but under the supposition that the fluid was bland it was not washed out. There is this much about the matter that there is enough doubt as to the contents of a hæmatoma to make it a sensible thing to always remove it, and to operate when we know that it is there.

DR. GEORGE E. SHOEMAKER:

These papers should not be discussed together. Dr. Massey's paper was against surgery of all kinds; Dr. Baldy's was a discussion of methods, after operation had been determined upon, with the idea of saving parts of diseased organs. As far as my personal experience and observation goes, the hope of success from these partial methods is not very great. If there is not sufficient disease to warrant total removal of a tube or an ovary in general, no operation is indicated.

The question as to the removal of small ovaries and tubes with a moderate amount of peritoneal adhesions is always a difficult one. The presumption is against removal where the disease is not decided, but it is almost impossible sometimes to determine in a given case whether or not surgery is going to do any good. No one can decide that without going over the whole body and bringing to his aid all his knowledge of disease in general. In many cases of difference of opinion the personality of the person studying the case has to be considered. The man who has a private hospital where he devotes himself to the treatment of nervous diseases becomes in the course of years involuntarily rather opposed to surgical methods. I do not mean to say that he would dishonestly oppose operation, but he naturally sees those cases where he obtains success without such measures. Few cases requiring major operations go to him. I might as well oppose those surgeons who operate for strabismus, arguing that since I never see a case in which such operation is needed the cases do not exist. The man who sees no cases requiring operation should not sit in condemnation on the rest of the pro-

fession that do see them. The man who successfully does major operative work finds these cases seeking his office, and he cannot devote himself to the minor forms of endometritis and various little things. This should not prejudice the man who does major work against the man who devotes himself to minor ailments, providing both work conscientiously.

With regard to the painful ovaries which contain small cysts, it seems to me there is an element of disease present in a certain number of them and that a certain number present no disease, and we cannot diagnose between the two before operation, and often not afterwards. I have not found that the pathologist can always tell the difference. One thing is certain, neurotic cases without demonstrable pelvic disease should be treated by non-operative measures, whether there is pelvic pain or not.

DR. W. S. STEWART :

I wish to endorse what Dr. M. Price has said and also to deprecate the general tendency to the removal of ovaries. There is not only this tendency, but the desire on the part of patients to have the tubes and ovaries removed whether they are diseased or not. I recently had a case that annoyed me very much. I insisted that there was nothing that I could do even if I attempted to remove the tubes and ovaries. I sent her to a prominent gynecologist and he could find nothing abnormal to remove. A young and inexperienced operator would be tempted to gratify the desire of a patient under such circumstances. It is well for us to take this matter into serious consideration. I think that it would be just and fair, in the present condition of gynecological practice, to have experienced and conscientious gynecologists with whom the young operator should have the privilege of consultation before performing such grave operations. I recall one instance in which another physician and myself had a dispute as to which ovary was diseased. At the operation it happened that I was right. That man would not now make such a mistake. At present almost every man throughout the world who knows where to cut for an ovary will perform the operation. This is becoming a serious matter. We have recently had a paper written by a doctor whose repu-

tation is very high, and who is regarded with great favor, who opposes now what he formerly advocated. That paper has and may, probably, do a great deal of harm, and therefore we should consider the points that Dr. Price has made.

DR. W. EASTERLY ASHTON :

There are two points that I should like to touch upon: first, my position in conservative gynecology, and, second, the question of diagnosis. Personally I do not believe that any operation should be done in the pelvis for pure conservatism except to be to retain the functions of the female. I think that in certain cases we may consider the objections to the removal of all ovarian tissue. There have been a number of cases in which insanity has undoubtedly followed as the result of complete removal. I saw last month a woman who had been operated on by a prominent operator five months previously. She was suffering with acute mania. One week later she burned herself to death by pouring coal oil on her clothing and setting it on fire. In another case, I lately heard of, the same condition supervening. This seems to be the principal question that we should consider in conservative work. The mere question of pregnancy occurring hardly enters into serious consideration. The number of cases in which pregnancy occurs is too small to weigh against leaving in the pelvis anything that is at all diseased.

With reference to diagnosis. I do not know a single surgeon whose diagnosis I would accept absolutely in many abdominal and pelvic cases. I do not believe that there is a man in the room who can, prior to section, say in all cases that this ovary is diseased and should come out, or that this one is not diseased and should remain. I have seen many mistakes in this matter of fine diagnosis. We can tell what, in all probability, the condition is, or say, whether or not the case should be operated on. But to go into fine questions of diagnosis and say absolutely whether or not the case is one of pus, ectopic gestation, or hydrosalpinx, or this, that, or the other, I do not believe that there is a man in the room who can do it. You may hit it a certain number of times, but it is not a positive diagnosis. There are no methods by which we can make a positive diagnosis in the pelvis unless the case is very clear.

With regard to appendicitis. It is all very well when we have a clear cut case to say that appendicitis is present, but there are many cases in which it is impossible to diagnose the disease. Let me give a case in illustration. Two months ago I saw a woman who had been sick two weeks. She complained of pain affecting the whole abdomen, and nothing wrong was found in the pelvis. There was slight pain on pressure, but there was no localized pain. She was steadily getting worse and insisted upon exploratory operation. I found everything absolutely right until I reached the right flank. I found the tip of the appendix adherent to the brim of the pelvis. I removed the appendix and found in it the fin of a fish. This was a case where I would defy any one to make a diagnosis. There are cases which have been operated on for appendicitis where a distended gall-bladder has been found. Again we know that the abdominal organs are liable to be displaced, and we also know that disease is uncertain in its symptoms, and I therefore criticise the statement of Dr. Price that a positive diagnosis can be made in all cases. The most that we can do in the majority of instances is to demonstrate the presence of a gross lesion and say that operation is required. I know of a case where a professor of gynecology operated for pus-tubes and nothing but adhesions were found. If these mistakes can be made by men high in the profession, they must be made by every one.

DR. G. BATTON MASSEY:

As has been stated, the most important question is one of pathology. This is a question with which I dealt in my paper, a question with which I think the Society does not deal as fairly as Dr. Joseph Price claims. To put it plainly, we have a pathologist here and, in spite of the many bucketfuls of specimens presented, we hear no reports. There are nothing but gross reports,—guesswork, in other words. I do not know the reason for this, but it has been intimated that one of the gentlemen did not want the pathologist to report on his specimen. I think that the Society is not doing its duty in the matter of pathology, and I think that a little more work and less talk on that subject would be of much service.

As to the question whether or not a diseased tube can recover, the average speaker of to-night has claimed that proof is required that it could recover. You might as well require proof that it could not recover. Analogous conditions in other parts of the body are continually recovering under the influence of time and the natural force of the body tending towards restoration of function. I am quite sure that I have seen numerous instances where diseased tubes have recovered. It is true that diseased tubes, the results of inoculation with gonorrhoeal infection, are the most hopeless, but these certainly do not cover the whole field. There are many diseased tubes in virgins, and many of these get well.

These partial operations to which reference has been made are another illustration of the surgical tendencies of the day. They know that the past work is wrong and they cut out a portion of the diseased organ, but they do not tell us that they have done anything else to reduce the diseased condition, and consequently their results are bad, and necessarily so. If they were to cut down on a healthy ovary and remove a portion, their result would be bad.

I think that Dr. Shoemaker misconceives a portion of my remarks. I do not condemn all major surgery. I simply condemn the invariable resort to it. I also condemn the feeling that waiting until the final almost invariable result occurs incurable, and then performing a so-called major operation is of more importance to the human race than the prevention of such conditions by earlier treatment. Possibly the best outcome of such discussions as these would be the voluntary arrangement for consultations before the deliberate removal of any portion of the human body is practised. We know that it is the practice of the old teachers to say that no serious operation of this kind should be performed without consultation of, at least, three persons. I think that it would be well if the profession appreciated this point, and arranged for referee consultations before operations of this sort, where operations are not undertaken for the immediate purpose of saving life. It would be well for the profession to adopt this measure before this great wave of operative furor strikes some other portion of the community with disgust.

DR. JOSEPH PRICE:

It is unfortunate that the members taking part in this discussion did not discuss the paper presented a few weeks ago and referred to by some of the speakers this evening. That paper is of great value to the author, but it will cost prominent operators many lives. It will increase our mortality.

Dr. Baldy's paper is the best paper that I have known him to read.

Dr. Ashton, in his remarks on diagnosis, loses sight of important facts in the natural history of pus. Time has a great effect; after the lapse of six years there will be scarcely the semblance of pus. Adhesions will be very intense and extensive. The woman will be emaciated and pale, passing two or three ounces of urine a day. In that case it will be an operation for adhesions. Now or early, it is an operation for acute pus-tubes. Dr. Ashton is in error, for diagnoses are made by specialist, by neurologists, and by the general practitioner. In our diagnoses we can always bring it down to one of two things, and, commonly, we can say precisely what it is. It is not necessary to say precisely that it is this or that. It does not make much difference whether the mass, one or more, is a pus-tube or a suppurating dermoid. The general practitioners are really our best diagnosticians and clinicians. I would say that the specialist should not only be a general practitioner, but he should have first been a country practitioner; second, a city practitioner; third, a specialist. Specialists should grow, not spring up like mushrooms.

With regard to the effect of operation on women. I insist that the women of Philadelphia, who have had good surgery, are the best looking and healthiest looking women in the city. They are also active and useful. They have not been robbed of the refined womanly attributes which we so much value. Very few women with fibroid tumors are right mentally. Very few with ectopic pregnancies are right mentally. Very few pregnant women are right mentally. The normal menopause nervous phenomena are sometimes alarming.

Dr. Baldy's analysis of Polk's work is an excellent one. Dr. Baldy demonstrates completely in the full and honest analysis of his own work what has probably taken place or

become of all of Dr. Polk's cases. Some have had operations in adjoining cities, others have gone into the hands of his friends, in two the operation has been repeated to restore them to health or correct incomplete primary work. This probably demonstrates the outcome of Dr. Polk's cases. Precisely the same thing will have to be done in all of his cases.

Blood-cysts, sometimes called hæmatomata, as I find them, are dangerous and virulent. It requires the most careful surgery, irrigation, and drainage to save them, if they are ruptured in the enucleations.

A word in regard to infantile uteri, or supra-involution, or a precipitated menopause. In the infantile uterus, or supra-involution, you have a condition of affairs simulating precipitated menopause following these operations when complete and thorough. You also have premature menopause, post-puerperal, or following prolonged lactation. In such cases, coming on at the age of 29 or 30 years, we have the peculiar nervous phenomena that are so much complained of. Johnson, Clark, Jones, and others have studied the pathology of the ovaries faithfully, but I feel that more working pathology from this Society than from their illustrated papers.

With regard to insanity, exceptionally few women have been lodged in the numerous asylums after operations of this character. Only three have been admitted to the Norristown asylum out of some 900 received in the past seven or eight years. Seven or eight have been taken out of the asylum cured by operation. Five per cent. of the insane should be taken out. That is so all the country over. I might refer to a case where a refined and intelligent lady, the wife of a professor, who, after counsel, was lodged in an asylum. Her husband consulted Dr. Agnew, and stated that she passed blood and slime by the bowel and had considerable pain in defecation. Dr. Agnew incised a fissure of the bowel, and in one week she returned home strictly healthy, mentally, and remained there. Probably in one per cent. of the women hæmorrhoids or fissures are at the bottom of the insanity. I have taken women out of three asylums and never made but one mistake.

DR. J. M. BALDY:

I have placed myself so fully on record in

my paper that I have little to add. With regard to hæmatoma, it is a question where to draw the line. I believe that in the majority of instances they are simply Graafian follicles filled with blood. True hæmatoma is a rare disease. Because one or two cases have died after operation signifies nothing, because we have cases die after removal of healthy ovaries. Sepsis from the nurse or physician cannot readily be excluded as the course in these few cases.

Dr. Massey says that the single case which he reports is amply sufficient to convince him. A man who is so convinced of a general principle by one case is not capable of forming an opinion on any subject worth considering.

With regard to cystic ovaries, it comes to the question as to what are cystic ovaries. In the vast majority of cases they are small cysts or hydrops folliculi. If you find two or three, the chances are that they are hydrops folliculi and not ovarian cysts. If you have sclerotic disease complicating the case, that is another thing. I did not discuss that. Sclerosis of the ovary is as much a disease as the same condition in the kidney or liver. If you have small cysts, you do not, as a matter of fact, have cirrhotic disease, but an entirely different condition. Those who wish to

operate on these small ovaries can do so, but I prefer to let them alone. I do not think that the operation can be condemned too severely. It is this class of operations which is being done all over the country which has brought discredit on the operation. It is true that in the vast majority of cases you can put the finger on the disease, but in these cases you cannot put the finger on the disease, and you operate for symptoms. It may be right to operate for symptoms, and again it may be wrong. It depends on the case. You will go astray many more times than you will find disease.

I think that Dr. Price and Dr. Ashton practically agree as to diagnosis. Dr. Ashton took the ground that you could say it was one of two or three things, but that you could not say precisely which one of these it was. You can say that it is pelvic inflammatory disease, but that is not making an absolutely accurate diagnosis.

HYSTERECTOMY FOR MYOMA OF THE
UTERUS. BY R. S. SUTTON, M.D.
(See page 392.)

Adjourned.

FRANK W. TALLEY, M.D.,
Secretary.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

ORIGINAL COMMUNICATIONS.

A Case of Neurotic Œdema.

BY EDWIN E. GRAHAM, M.D.,

Clinical Professor of Diseases of Children in Jefferson Medical College.

H. C., aged 7 years and 9 months, was brought to the Out patient Department of Jefferson Hospital on October 17, 1892. Father and mother healthy. One other child living and healthy. No miscarriages. Paternal grandfather died of phthisis. No neurotic family history. Parents on inquiry can learn of no similar condition having existed in either family. At age of 3 years "chills and fever;" none since three years. Living then at Pottstown, two blocks from Schuylkill River. While pregnant with patient, mother had distinct malarial attacks with chills, fever, and sweats. Whooping-cough at 5 years; measles at 6 years. Since 1 year has had repeatedly swelling and puffiness of eyelids and face, more marked on left side. No increased frequency of urination. Slight dyspnoea on exertion since 2 years. Palpitation; no cough; occasional headaches, mostly frontal. Heart regular, sounds clear, apex-beat in normal position. Pulmonary resonance normal; breathing slightly harsh; appetite good; bowels regular; tongue clean. Color fairly good. Sleep restless and disturbed. Temperature 99.3° F. Urine, sp. gr. 1026, acid, no albumen, no sugar. Sig.—Potass. arsenitis, gtt. i, t. d., to be increased. Quin. sulph. gr. v, each A.M.

October 26, 1892. Three days ago right eyelid and right side of face swollen. To-day left face markedly swollen; eye nearly closed; one half lower lip swollen. Pale, feels well,

no enlargement of spleen. Temperature 99.6° F.. Fowler's solution, gtt. iii, t. d. Quin. sulph. gr. v, each A.M.

October 31, 1892. Yesterday left eye swollen, not marked now. This morning right eye swollen; no swelling of face. Slight puffiness of feet, extending over one-half of dorsum, accompanied by smarting sensation; disappeared in part after two hours. Below and between toes puffiness with itching. Fowler's solution, gtt. ix, t. d. caused vomiting. Dose reduced to gtt. vi, t. d.

November 4, 1892. Slight puffiness above both eyes, most marked on left. Slight puffy condition in malar regions. No other swelling since last visit. Fowler's solution, gtt. vi, t. d. Temperature 99.6° F.

November 9, 1892. Examination of blood-vessels; absence of foreign plasmodia, but richness in Schultze's granular masses. Hæmoglobin, 66 per cent. Red corpuscles 4,950,000. Since last visit, on November 5, headache, frontal, followed in two hours by fever continuing three hours, followed by chill lasting half an hour. Temperature at time of visit 100° F. Fowler's solution, continued. Ext. ergot fl. gtt. xx, t. d.

November 14, 1892. No return of swelling for one week. This is longest interval. Color improved; active. Treatment continued.

November 19, 1892. Since last visit both eyelids swollen, with burning and itching sensation. Ext. ergot fl. gtt. xx, t. d. Strych. sulph., gr. $\frac{1}{60}$, t. d.

November 26, 1892. Since last visit swelling only of left lower lip once. Treatment continued.

December 17, 1892. Since last visit (three weeks) upper eyelids swollen, first one, then other, preceded by itching, first attack lasting three days, second twenty-four hours, third two hours. Strych. sulph., gr. $\frac{1}{40}$, t. d.; ext. ergot fl. gtt. xxx, t. d.

January 7, 1893. Once since last visit had decided swelling of upper eyelid and slight swelling on right side of nose. Ten days ago slight attack of tonsillitis. Treatment continued.

January 27, 1893. Puffiness of right upper lid once since last visit, lasting about eighteen hours. General health good. Strych. sulph., gr. $\frac{1}{40}$, t. d.

November 11, 1893. For thirteen weeks after last visit no swelling appeared, then slight swelling of eye noticed on arising in morning, eye becoming closed within half an hour; occurred twice in one week, followed by occasional slight swelling of eye for several weeks; eye never completely closed. No swelling in other parts of body. Strych. sulph., gr. $\frac{1}{40}$, t. d.

April 2, 1894. Since last visit, three attacks with only slight puffiness, two of left eye, one left side of lower lip. Last attack of eye one month ago. Swelling of eye confined to outer edge of upper and lower lids of left eye. General health remains good. Has taken little or no medicine since last November.

SOCIETY PROCEEDINGS.

New York Academy of Medicine—Section on Pædiatrics.

DR. JOSEPH E. WINTERS, CHAIRMAN.

Meeting of March 8, 1894.

DR. WILLIAM L. STOWELL presented a case of probable leucocythæmia. The child was nine months old, and had been ill for one month. The stools were green, but contained no blood. The abdomen was slightly distended; on the left side a smooth tumor could be felt, probably the spleen. It extended almost to the pelvis. On the right side another tumor extended about half as far. This was an enlarged liver. A tumor had also appeared at the right side of the jaw, examination of which showed it to be a hæmatoma. There was no enlargement of the epiphyses, and no enlargement at the ribs. Anæmia was extreme. The blood contained 35 per cent. of the normal amount of hæmoglobin. The white blood-corpuscles were slightly increased. The red corpuscles were not materially changed in appearance or number.

Dr. Sara Welt presented a case of umbilical fistula accompanied by a polypoid growth. The child was born at full term, and nothing abnormal was noticed except an irritating discharge at the umbilicus after the cord had fallen. At present a probe could be passed one and a half inches, and a polypoid growth the size of a small chestnut was visible. No urine, fæcal matter, or flatus passed from the fistula. The speaker believed it to be a persistent omphalo-mesenteric

duct. She believed it could not be cured except by a radical operation. She feared that the duct would not be closed by simply tying off the growth.

Dr. Brannan had seen a fistula in this region. It appeared to be an open urachus. It had been cured by ligation.

The Chairman was inclined to think that ligation by obstruction of the orifice might result in cure.

The subject for discussion was

BRONCHITIS IN INFANTS AND CHILDREN.

Dr. A. Reich read a paper on

COMPLICATIONS: DIFFERENTIAL DIAGNOSIS.

The most serious complications of bronchitis in children are,—

- (1) Inflammation of the small tubes.
- (2) Inflammation of the capillaries or broncho-pneumonia. These complications are far more frequent in bronchitis of the exanthemata than in the simple disease. The lining of the bronchial tubes is the seat of the inflammation. There is shedding of the epithelium and infiltration of the connective tissue. If this continues, we find distinct consolidation of the lobules, and sometimes extensive infiltration forming the so-called pseudo-lobar pneumonia. The consolidation

is usually located at the base, is often wedge-shaped, and is also accompanied by atelectasis, some emphysema, and frequent involvement of the capillaries. As to the mode of origin, the inflammation originates either from the stopping of a small tube or more rarely by the primary affection of the connective tissue. After the stopping of the bronchioles with a mucous plug collapse develops rapidly, two hours sometimes being sufficient for the absorption of the air and falling together of the walls. By the second method of origin, the epithelium is involved after the inflammation of the peri-bronchial connective tissue. This process is followed by bronchiectasis, cirrhosis, and tuberculosis.

Bronchitis of the smaller tubes is marked by an increase of all the symptoms. The respiration is characteristic. The inspiration becomes shorter at the expense of the expiration, the latter being accompanied by a moan. As it progresses, and but few lobes are involved, physical signs are uncertain, but become marked as pneumonia develops.

Dr. Charles G. Kerley read a paper on

MANAGEMENT IN INFANTS UNDER ONE YEAR OF AGE.

The methods of management described and the conclusions arrived at were taken from an experience of several hundred cases of bronchitis seen at the New York Infant Asylum, in which the writer gave personal attention to the patients, and was able to make close observations. Flannel worn next the skin is a necessity, the clothing being comfortable and loose-fitting. The band should be disposed

of in an infant over six weeks of age. Its chief office is to slip up under the arms and form a constriction which interferes with the respiration. Even when held down to the napkin, it is apt to obstruct the lower part of the chest. Clothing damp from any cause should not be allowed. The jacket, made of non-absorbent cotton and oiled silk, is frequently of help.

The child should not be held in the lap. In a weak child the lower lobes are most often involved, hence, changing the position frequently is necessary. The child should not be allowed to remain long on the back. Bathing or sponging with lukewarm water is also beneficial. If there is slight fever in the evening, the sponging should be done at this time, for it reduces the temperature, and its tonic effect is seen in producing quiet. The general bath and packs the author does not use. If there is dyspnoea and a hard tight cough, a hot mustard bath (100° F.) may prove of great service. A hot mustard pack will also be found of service. This hot bath or pack should not be given more frequently than twice a day. As the disease becomes deeper seated, with rapid breathing, cyanosis, and dry cough, the use of the steam spray will aid materially. It may be used with plain or medicated water. The spray should be used fifteen minutes every hour or every half hour, or even continuously for a time. With some children it is impossible to use the spray, as they rebel against it. The child's cloths should be protected with a rubber sheet during its use.

Counter-irritation to the chest has given the writer the best results of all methods he has used. In mild cases camphorated oil, turpentine,

and vaseline, or camphor oil, turpentine, and aromatic spirits of ammonia may be used. They should be rubbed in quite thoroughly until the skin is reddened. In the more severe cases a mustard paper should be applied from one to three minutes twice a day. Equally efficacious is a paste made of mustard and flour, one to five. This spread between two pieces of muslin and applied quite moist can usually be left on from ten to thirty minutes.

Drugs are much less important than either of the foregoing methods. Castor oil in small doses (three to five drops) has an excellent effect in infants, and may be given every two hours for two or three days. Ipecac ($\frac{1}{20}$ to $\frac{1}{30}$ grain) alone or combined with tartar emetic ($\frac{1}{80}$ grain) may aid considerably. The most convenient form of administration is the tablet triturate. In a strong child of eight months a tablet composed of muriate of ammonia ($\frac{1}{4}$ grain), ipecac ($\frac{1}{20}$ grain), tartar emetic ($\frac{1}{100}$ grain), may be given every two hours. If it is desirable to produce emesis, fifteen drops of wine of ipecac every fifteen minutes will usually be successful in an hour. If the case is urgent, a teaspoonful may be given at one dose. If a stimulant is required, ten to thirty drops of whiskey should be given every hour. For irritability and restlessness, small doses of bromide and chloral, or a small dose of Dover's powder ($\frac{1}{8}$ to $\frac{1}{10}$ grain), may be given. The administration of sweet and nauseous cough preparations should not be tolerated.

Dr. Henry Koplik read a paper on

TREATMENT OF BRONCHITIS IN CHILDREN.

In a previously healthy child un-

complicated bronchitis should be treated simply with a full knowledge that it is a self-limiting disease. The fever, if present, needs but little treatment. Antipyrin and phenacetin should be avoided and all the drugs which reduce the vitality. Cold packing is also unnecessary. Bathing should be interdicted, for careless exposure may cause serious results. A mild opiate may be given if indicated.

The so-called capillary bronchitis of the elder writers we now believe to be beyond the category of simple bronchitis. It should be assigned to the subject of pneumonia. Cough is nature's method of curing the affection by draining the bronchi. Nothing should be given which will seriously interfere with this action. Small doses of ipecac are often of value. Strychnia in small doses is one of the most valuable drugs in this condition. It does service by improving the appetite and aiding the action of the heart. In more serious cases, especially when the child coughs when placed on the back, some drug of the balsam series is indicated. Tereben is one of the best. In moderate doses ($\frac{1}{2}$ to 2 min.) dropped on sugar it is very efficacious and does not disturb the appetite. We frequently find in chronic and subordinate cases that there is more or less trouble in the naso-pharynx. The cough will not cease until this is relieved.

Quinine is rarely indicated, a statement which is also true of whiskey and wine. Iron in the form of syrup of iodide is very valuable in the sub-acute stages.

The treatment of bronchitis in a delicate child suffering from rickets or other serious disorders requires the

addition of other drugs, especially phosphorus.

Professor William H. Thomson said that the title of the papers implied that bronchitis in children presented especial features, and that this was true. Bronchitis, except in exanthemata, is never primary in the bronchial tubes. It starts with disorders elsewhere, usually in the skin. Wet-ting of the back of the neck, followed by slight exposure to cold, will invariably produce pharyngitis in a strong child. Covering the back of the neck at night is sometimes sufficient to prevent the disease when it is prone to recur. Children who perspire freely about the head and neck during sleep are always liable to bronchitis. It can frequently be prevented by sponging the neck with cold salt water at bedtime, and protecting the nape of the neck. The skin of a child is thin and vascular, and especially susceptible to cold.

Bronchitis in a child is a serious disorder. The younger the child the more serious the disorder. This is due to the very small relative muscular strength. The expiratory muscles are especially weak in infancy. Hence, the pharynx readily becomes clogged with mucus, and the difficulty is greatly increased. The mechanical effort of breathing rapidly exhausts the strength, hence, it is important to keep the back of the throat clear as far as possible. Children who are apparently doing well will sometimes change suddenly, and the condition become alarming from sheer physical collapse. Mucus should be removed from the back of the throat, and it sometimes becomes necessary to give an emetic to accomplish this. Ipecac should be used, but not in the form

of the syrup. The powder itself should be employed, dissolved in water. As the child vomits, the thick mucus should be drawn from the back of the throat with the finger as much as possible. Capsicum is a better counter-irritant than mustard. It may be used as a pack as follows: a teaspoonful of red pepper is dissolved in a pint of water. Flannel should be wrung out of this and applied to the chest as a pack. It will not blister. The condition of the heart and respiration should be closely watched. Nux vomica is an excellent stimulant. One drop may be given at 1 year. Muriate of ammonia is a drug of considerable value. An expectorant cough is very different from an irritant cough, and requires very different treatment. The best remedy for an expectorant cough is an emulsion of linseed oil. If there is an irritant element, a very small dose of morphia or chloral may be added.

Dr. Simon Baruch advised a judicious process of hardening as the best preventive of bronchitis. This is best accomplished by a tepid bath properly given. After the usual bath the nurse should dip her hand in water at 80° F., and gently slap the baby's body. The temperature should be reduced two degrees each day, to 60° F., but not lower. At this point water at 80° F. should be again resumed, but instead of slapping the body the water should be taken in the hollow of the hand and dashed on. The temperature should be again gradually reduced, and this process should be repeated every day.

At the outset of the attack he usually gives a mercurial to act upon the bowels. He uses bathing gently to open the surface vessels, and thus re-

lieve the heart. By taking away obstructions in the capillaries the heart's action is greatly relieved. The reduction of temperature is a minor point. The temperature of the bath should not be over 95° F., and should be reduced to 85° F., perhaps 80° F.

Dr. John Winters Brannan said that he also began treatment with a cathartic. He uses counter-irritation to the chest. At first he employs a poultice consisting of one part of mustard, and five of linseed meal, and has never seen any bad results from it, on the contrary much good. This is not long continued. He then applies the cotton-jacket, made of cotton batting and oiled silk, and directs the chest to be rubbed freely with camphorated oil with considerable friction. Muriate of ammonia is one of the best expectorants if the cough is dry and croupy. He uses steam in the form of vapor, with a little turpentine or benzoin. He frequently uses aconite in small-repeated doses, and does not

bathe the child while the disease is active.

The Chairman referred to the importance of keeping the tubes clear. The necessity of this was shown by Dr. Reich's remarks, of the frequency of collapse, and by Professor Thomson's, on the weakness of the muscles. He called especial attention to the value of nux vomica in these conditions. He has used mustard externally, and with the most satisfactory results.

Dr. J. Lewis Smith said that we must remember that broncho-pneumonia resulted from mechanical causes,—the gravitation downward of the muco-pus, and its aspiration into the bronchioles. Hence, the importance of keeping the tubes clear and promoting cough. It is not wise to check the cough, if it is expectorant in character. He uses opium but little, but relies upon bromide of sodium for producing quiet. Muriate of ammonia in the infant, and the carbonate in the older child, often do excellent service.

ABSTRACTS FROM CURRENT LITERATURE.

Abdominal Tuberculosis in Childhood, and its Treatment.

FREDERICK TAYLOR (*British Medical Journal*, September 30, 1893) states that gastric tuberculosis in children is rare, but that intestinal tuberculosis is common. The latter may be associated with tubercular peritonitis, with caseation of the mesenteric glands, with general tuberculosis, or local pulmonary tuberculosis. In this last case it is often secondary to the

pulmonary lesion, resulting from the swallowing of sputa. Infection from the ingestion of milk of tuberculous cows is generally accepted. Whether children of tuberculous mothers are infected through the milk or the air is a mooted question. Caseation of lymphatic and mesenteric glands has been found 100 times in 127 cases of tuberculosis in children, or in 79 per

cent. Suppuration of these glands and perforation may set up general purulent peritonitis.

Tuberculous peritonitis occurs in two forms,—in one the peritoneal surface is covered with miliary tubercles, and a quantity of serum is secreted so as to constitute a real ascites; in the other the tuberculous process results in the matting together and adhesion of the coils of intestine, associated with enlargement of the mesenteric glands, and possibly the formation of abscesses, tuberculous ulceration of the bowel and perforation, so that adjacent coils of the intestine communicate with one another. The result of this combined matting, adhesion, and glandular swelling is the formation of a more or less definite tumor, which can be felt to occupy a certain portion of the abdomen. The omentum may be similarly infiltrated, and form a band lying transversely across the abdomen at its upper part; and a similar infiltration also may affect the connective tissue about the remains of the urachus and obliterated hypogastric vessels. The tuberculous tumor in a large number of cases occupies the lower part of the abdo-

men, corresponding to the hypogastric and two iliac regions. Undoubtedly in most of these cases ascites is not present.

The medical treatment consists in rest, nourishing food, cod-liver oil, and inunctions of mercurial ointment on the abdomen. Of late, many cases have been treated by laparotomy with remarkable results.

In discussing the paper, Marsh remarked that from a surgical standpoint three conditions are observed,—

(1) Cases in which the peritoneal sac contains much free fluid.

(2) Cases in which the fluid is encysted, forming movable, elastic tumors, either so soft as to resemble ovarian cysts, or so hard as to suggest sarcoma.

(3) Cases in which no fluid is present, the exudate being fibrinous.

Well-authenticated cases show that in a large proportion of these cases operative interference is followed by the arrest of tuberculous process and a return to good health. This has occurred where the abdomen has been simply opened, inspected, and immediately closed, so that the *rationale* of the procedure is not yet understood.

Whooping-Cough and its Treatment by Bromoform.

PELLICER (*Revist. Bal. de ciencias Med.*, October 14, 1893) discusses the treatment of whooping-cough, and concludes that of all remedies bromoform is the most serviceable. It is a colorless liquid obtained by the action of bromine on alcohol, and when administered to animals, hypodermically or by inhalation, produces narcosis,

without affecting the circulation or respiration. Stepp, of Nuremberg, first employed it in whooping-cough. The dose is one drop for each year of age of the patient four times a day. If the paroxysms are not reduced by the third day, the dose should be gradually increased. On one occasion the author was obliged to ad-

minister forty-eight drops daily to a child of 2 years, and the only ill effect observed was a general erythema. There was no diarrhoea, and the respiration and pulse were not quickened. Failures with bromoform, the author concludes, result from not increasing

the initial dose. Bromoform diminishes the number and duration of the paroxysms; under its influence vomiting ceases and the appetite returns. Under this treatment the duration of the disease is only two or three weeks, and in many cases much less.

Indicanuria in Infants.

DJOURITCH (*Rev. Men. des Mal. de l'Enfance*, February, 1894), from an exhaustive study of the subject, concludes as follows: (1) Indican exists in normal urine, but in such small quantity that one can consider indicanuria pathological, especially in children in whom the diet is much less nitrogenous than in adults. (2) Indican being a derivative of indol, indicanuria will be particularly marked in maladies associated with a hyperproduction of indol. (3) This hyperproduction shows itself especially in diseases of the digestive tract, both acute and chronic. (4) It is also

observed in certain acute diseases, such as typhoid fever, pneumonia, bronchitis, chorea gravior, and in diphtheria at the height of the disease. (5) It is constantly found in tuberculosis; such a close relation seems to exist between indicanuria and tuberculosis that the presence of the former might materially aid in the diagnosis of obscure cases of the latter. (6) The occurrence of indicanuria in cases of tuberculosis unassociated with digestive disturbance is difficult to explain, although the impairment of the general nutrition may in part account for it.

A Case of Congenital Cirrhosis of the Liver.

NEUMANN (*Berliner klinische Wochenschrift*, No. 19, 1893) reports a case of a girl, probably syphilitic, born jaundiced, and who died jaundiced at the age of seven months. During life the symptoms of jaundice were marked, the skin, mucous membranes, and urine being deeply colored. Digestion was fairly good. The liver extended anteriorly 5 to 6 centimetres below the ribs, and the spleen also was somewhat enlarged. The temperature was normal, and the child gained slightly in weight.

At the autopsy all the organs except the liver and lungs appeared normal. The liver was much enlarged; its surface was granular. On section the substance was firm; the bile-ducts were atrophied and free from bile. Microscopic examination revealed a diminution of the acini, pigment deposits between the hepatic cells, a cellular infiltration inside of acini, and a considerable proliferation of connective tissue between the acini, occluding a great number of biliary capillaries.

The cystic and common bile-ducts were permeable. The hepatic duct could not have been occluded, as otherwise the bile capillaries would have been dilated instead of atrophied.

The obstruction was probably due to the overgrowth of connective tissue between the acini. The author attributes the cirrhosis to syphilitic infection.

Gonorrhœal Rheumatism in Vulvitis of Childhood.

RICHARDIÈRE (*Union Médicale*, October 26, 1893) describes a case which occurred in a child aged 7 years. The origin of the discharge could not be ascertained, but it contained gonococci. She was a sickly child, and was seized with abdominal pains and inflammation of the vulva, involving the urethra. A fortnight later the left knee and the right foot became painful. Two days afterwards the left wrist was involved. Forty-five grains of salicylate of soda were prescribed daily. The temperature rose to 103° F. The right ankle-joint became very red, swollen, and tender on the third day after the beginning of the salicylate treatment. Severe synovitis in the peroneal tendons set in, and the drug had no effect on this complication. The right

leg was fixed on a splint, and at once the ankle began to get better. At the end of a fortnight the joint was quite healthy. There was no stiffness or muscular atrophy. The affection of the ankle bore all the characters of gonorrhœal rheumatism, the fever had subsided, specific medicines had no effect, and the swelling and redness were very marked. No cardiac trouble was observed. Deutschmann has already noted cases of gonorrhœal rheumatism,—that is, rheumatism in children suffering from vulvitis, and bearing all the characters of the joint affection complicating gonorrhœa in adults. He records cases in infants aged 3 years, or as young as 20 months. It may also follow ophthalmia neonatorum.

BOOKS RECEIVED.

AN AMERICAN TEXT-BOOK OF THE DISEASES OF CHILDREN BY AMERICAN TEACHERS. Edited by LOUIS STARR, M.D., assisted by THOMPSON S. WESTCOTT, M.D. Philadelphia: W. B. Saunders, 1894.

In the preparation of this work Dr. Starr has secured the co-operation of about sixty well-known authors, and

the result has been the production of a most excellent treatise upon the diseases of childhood. There have also been included special chapters on essential surgical subjects,—on Diseases of the Eye, Ear, Nose, and Throat; Diseases of the Skin; and on Diet, Hygiene, and General Management of Children.

The introduction contains a very able and practical discussion of the clinical investigation of the diseases and the general management of children,—feeding, bathing, clothing, sleep, exercise, and massage, sea-air and sea-bathing in convalescence, etc. The work is then divided into thirteen parts.

Part I. is a chapter upon Injuries Incident to Birth and Diseases of the New-Born. The diathetic diseases, the acute infectious diseases, general diseases not infectious are then discussed by various authors. Diseases of the blood, digestive organs, nervous system, respiratory system, of the heart, genito-urinary system, of the skin, ear, and eye follow, and in all make a volume of about 1200 pages, well printed, and quite profusely illustrated.

The book has been prepared for the student and those engaged in active practice as a working text-book. Its merits are apparent throughout. The plan of dividing the work among so many contributors is attractive, and, although it prevents unity in style, its manifold advantages of special adaptability of each author to the subject selected for him make the charm and real value of the work. The rapid advances in pædiatry and the larger attention the ills of childhood are receiving, both from the specialist and those in general practice, create a demand for a book like

the one before us. It is clinical, practical, and complete.

A TEXT-BOOK OF THE THEORY AND PRACTICE OF MEDICINE BY AMERICAN TEACHERS. Edited by WILLIAM PEPPER, M.D., LL.D. In two volumes. Illustrated. Vol. II. Philadelphia: W. B. Saunders, 1894.

The second volume of this excellent work contains the following chapters: General Considerations concerning the Biology of Bacteria, Infection, and Immunity, by William H. Welch; Diathetic Diseases, The Acid Dyscrasia, Rickets, Osteomalacia, Obesity, Biliary Lithiasis, Gravel, Saccharine Diabetes, Polyuria, Rheumatoid Arthritis, Gout, Rheumatism, by Henry M. Lyman; Diseases of the Blood and of the Suprarenal Capsules and Ductless Glands, by William Osler; Diseases of the Pericardium, of the Endocardium, of the Myocardium, Neuroses of the Heart, Malpositions and Congenital Affections of the Heart, Diseases of the Blood-Vessels, the Mouth and Tongue, Salivary Glands, and the Mediastinum, by William Pepper; Diseases of the Nose, of the Larynx, of the Bronchi, and Pleura, by James C. Wilson; Diseases of the Lungs and Kidneys, by Francis Delafield; Practical Urinary Examination, by James W. Holland; Diseases of the Peritoneum, Liver, and Pancreas, by Reginald H. Fitz.

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ORIGINAL COMMUNICATIONS.

Hæmorrhage after Abdominal Section; Its Place in Statistics.

BY A. H. BUCKMASTER, M.D.,
NEW YORK.

THIS subject is of greater importance than the space allotted to its consideration in the works on abdominal surgery would lead one to suppose. Not only has the subject received but scant attention, but the number of cases reported is very small. We hear of them from many quarters, but the medical press has very little to say on the subject.

It is not difficult, however, to understand why cases are so infrequently reported. Twenty-five years ago a large number of the cases of abdominal section died; indeed, in one of the large hospitals in this city, whenever an operation of this kind was to be performed, a room was set aside and arrangements were made

for the funeral confidently looked for. Suddenly the high death-rate was changed, as if by magic, to a low one, and what seemed to be impossible became an established fact. In their excitement men lost their sober judgment, and statistics were presented, which in some cases were more in accord with what men hoped to do than what they had accomplished. Even to-day the most remarkable records are urged by enthusiasts as a standard of what should be expected from an expert operator with a fair amount of good fortune. If these results are to be accepted as a standard, then the odium incurred by an operator who loses a case from hæmorrhage is deserved. But these fig-

ures are not to be accepted as a standard. They merely indicate to my mind the same good fortune which enables a gambler "to break the bank," and are in nowise to be looked upon as what we should expect.

I do not wish to make the consideration of these statistics personal, and there is no intention to express a lack of respect for statistics, for while the best men may not have the best statistics, the poor man cannot hope to obtain them fairly; but the objection is to their being accepted as a standard. Having referred in a general way to statistics, my position will be more intelligible when I say that a mortality of 10 per cent., taking into consideration the great number of uncontrollable accidents, is a good showing, and in cases as they come to the pelvic surgeon, and a mortality of 3 per cent. is a remarkable showing.

The importance of placing this question in its proper light is shown by the action of counsel in the case, recently tried of Jones against the *Brooklyn Eagle*. The experts who testified at this trial were asked the number of laparotomies they had done, and it seemed to be tacitly admitted by both sides that this number could be used to estimate a man's qualifications as an operator, as the horseman judges of the value of a horse by his record. If the profession allows such ideas to become fixed in the lay mind without protest, we must not be surprised if the courts, thinking that they are asking the ordinary skill of the expert, should demand impossibilities.

The best argument against accepting these statistics is that they eliminate so many uncontrollable causes of death. We do not propose to consider

these cases in detail, but will confine ourselves to that one which is the title of this paper. It is not rare for the general surgeon to observe hæmorrhage some time after operation. The writer had a case of alarming hæmorrhage which occurred ten days after operation for repair of the cervix, and had it been within the peritoneal cavity, a fatal result could not have been avoided. Hæmorrhage after operation, where there is every opportunity to secure the vessels, is not of very rare occurrence, and no surgeon is so bold but that he in some measure guards against it. In case of amputation of a limb, the blood is detected as soon as it soaks through the dressing, but in case of hæmorrhage into the abdominal cavity, we have no such warning, and, indeed, I believe we have no warning at all until the patient is beyond the reach of help. The drainage-tube may in rare cases be of service, but I am of the opinion that its usefulness in this direction has been exaggerated. Delbet has shown, by a number of carefully-conducted experiments on the dead subject and on dogs, that it is almost impossible to keep the peritoneal cavity in communication with the open end of the drainage-tube, for if the intestines do not crowd into the end of the tube, it is soon sealed off by an exudate. I am aware that this view has not gained the general endorsement of the profession, but, nevertheless, it has been borne out by my experience. If this view is a correct one, the claim of Professor Tait that the drainage-tube is of use by removing the secretions, and thus aiding in the formation of a clot by preventing the dilution of the blood, falls to the ground. Tait calls attention to another point

which is of greater importance. In the peritoneal cavity we have a condition which is in a great measure peculiar to this part of the body. The bleeding is from a free surface where there is no connective tissue to act like a web, and offer a surface to which the coagulating blood can adhere, and the suction action of the diaphragm and the movements of the abdominal viscera tend in some measure to dislodge forming clots. Another fruitful source of hæmorrhage, and one to which we shall allude later, is the formation of thrombi. This is apt to occur when the broad ligament forms a part of the pedicle.

Death from hæmorrhage frequently occurs and the true cause is not detected at a partial autopsy,—I say partial autopsy because many such cases are not thoroughly examined. The medical man is worn out with anxiety, and does not press the question of an examination, or the friends peremptorily refuse. The operator then loosens the stitches, and makes a hasty examination of the pelvis. Finding this cavity free from blood, and that there are evidences of a commencing peritonitis, he lays the death of the patient at the door of the latter condition. This mistake arises from the fact that the foot of the bed has been elevated when the patient showed signs of syncope, and the blood gravitated towards the diaphragm. This fact has an important prophylactic bearing. We should be careful about raising the pelvis in cases of hæmorrhage, for fear that not only will the existence of clotted blood be hidden, but it will be difficult or almost impossible to remove it.

There are many reasons which might be given to prove that hæmorrhage

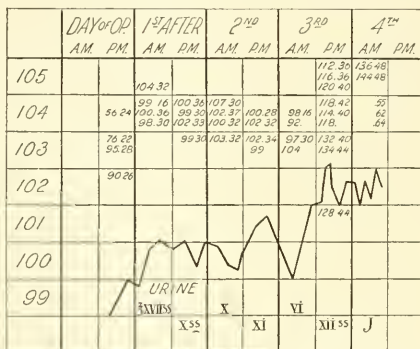
into the peritoneal cavity is less easily controlled and more likely to persist than in most other parts of the body, and we may fairly ask, How can we hope to escape a danger in this case which we cannot control under more favorable conditions? If all the cases of fatal hæmorrhage were reported, the clinical records would be in accord with what I have claimed in regard to the frequency of this condition. Since I have had the misfortune to lose a case from hæmorrhage, I have had over forty cases narrated to me by almost as many operators. All these cases are unpublished, and though a few of the men told me that I was at liberty to publish their names in connection with their case, it seems better to treat it in an impersonal manner; this I will do by giving the deductions drawn from their study. While I have alluded to those who do not publish their cases, it is not my intention to blame them, for, in the present state of opinion, an operator who loses a case from hæmorrhage will meet with criticism, which in the presence of the aforesaid statistics will be severe, and possibly injurious. I have heard Dr. Thomas say, in regard to a man who boasted that he had never lost a case from hæmorrhage, I do not know how large his experience is, but when it is large he will not be able to make such a statement. Before giving my general deductions, I will present the case occurring in my practice.

Miss H., under 30 years of age, had noticed that the abdomen was enlarging for two years. She had not menstruated for two months before I saw her, and had been irregular the month before the last flow for the first time in her life. Examination showed a

thin-walled cyst as large as a foetal head at term. The vagina was so small and the patient was so nervous that the vagino-abdominal method was not available, but the breasts were virginal, and the hymen, a delicate membrane, was unruptured. The urine was normal. When the abdomen was opened the cyst presented and looked like the uterus, on account of the vascularity of the broad ligament which covered it. A vein crossing over the tumor was as large as a lead-pencil. The fluid was clear and easily evacuated, and after tying two

back as far as usual, on account of the tension of the broad ligament. The ligament looked puffy about the stump, and I am now convinced that there was a collection of blood there at the time. Below are given the pulse, temperature, and respiration record:

As will be seen, there was nothing to be remarked in these particulars on the day after the operation, except that the respiration and pulse were somewhat accelerated, and the temperature reached 101° F. in the vagina. The patient was of a highly nervous temperament, and had a mild bronchi-



Pulse, temperature, and respiration chart of a case that died from internal hæmorrhage.

adhesions which connected the tumor to the abdominal wall the pedicle was brought into the opening. This was transixed with a non-cutting needle carrying a double silk thread, and after the loops were locked and tied the thread was completely passed around the stump. The stump was allowed to fall back, so that it might be examined, while no traction was made on it, a very necessary precaution, and as there was no oozing, it was not further regarded, and the operation was completed. It was noticed that the stump did not fall

tis, so that this slight elevation of temperature had but little significance.

On the second day there was no change, except that the pulse was somewhat higher. There was little or no abdominal tenderness. On the morning of the third day I was unable to see the patient; she was reported to be in a much better condition by a medical man. In the afternoon the pulse ran up and the temperature reached 103° F. by the vagina. The following morning she died. In regard to reopening the abdomen, the previous cases operated on in the

same room and under the same condition had developed higher temperatures than did the patient until she was beyond the reach of help. The symptoms which she presented were those which might have arisen from the slight bronchitis, a commencing abscess of the abdominal wall, or from that rare but by no means to be neglected condition, malarial poisoning. I have opened the abdomen without finding hæmorrhage, and yet with more marked symptoms. The autopsy showed the following conditions: Pelvic and abdominal organs normal, except there were some slight degenerative change in the cortex of one of the kidneys. The pelvic and abdominal cavity contained a large amount of blood. Part of this was fluid and part had formed large clots. There was evidence of a commencing peritonitis. The pedicle was covered with clots, and a portion of the peritoneum had slipped out of the constricting band of silk and the opening made communicated with a large cavity containing a blood-clot. The death was from hæmorrhage primarily, and secondarily from a commencing peritonitis. A portion of the broad ligament had slipped out of the embrace of the ligature and a mass of blood had dissected up the broad ligament. I think this blood commenced to flow before the ligature slipped, and was to a great extent the cause of the mishap. That the blood is capable of doing this is shown by such cases as that related to me by Dr. Emmet. In his case the whole of the peritoneum lying on the pelvic floor was raised to such an extent that it was separated from the kidney. In my case the ligature placed the greatly-hypertrophied broad ligament

on the stretch, thus lifting it from its attachment, and inviting the collection of blood which formed beneath it. Then we had a solid mass enclosed by a non-elastic membrane. The patient vomited violently when she came from under the influence of the ether, and it was this which favored the slipping out of the pedicle. The ligature at the autopsy was tightly constricting the portion it still held, and the careful examination given to the stump before the abdomen was closed precludes the theory that it was not included at the time.

In studying the cases which I have been able to collect, I have noted the following facts:

The greater number arose from the slipping out of the hypertrophied broad ligament from the grasp of the ligature. Next in importance to this cause was the reliance on pressure by means of sponges or gauze. The debilitated condition of the patient, combined with the long operation, induces the surgeon to try to control the escape of blood by a makeshift. Two cases were due to the slipping of a clamp after hysterectomy. A cause of hæmorrhage, to which I have had the honor to first direct the attention of the profession, and which Dr. Polk has confirmed, is occasioned by the use of the Trendelenburg posture. In this position the flow of blood may not be noticed, because, with the hips elevated, the blood-pressure in the pelvis is much reduced; but let the pressure be increased, by placing the patient in a horizontal posture, and the hæmorrhage may become free. But of all the cases given none are so fruitful in occasioning disaster as those which presented a broad stump that contained hypertrophied broad ligament.

Certain conclusions have been reached by a careful consideration of the experience of myself and others:

(1) When the abdomen is closed after section the case is closed. No treatment short of that which is aggressively bad will influence the after-result. Nothing, therefore, should be left undone, with the reservation that the case may require reopening. It is often better to run the risk of death from shock than the risk of death from hæmorrhage. Many of the fatal cases were the result of that state of mind which the operator revealed when he said, "I was afraid that the patient would die on the table, and therefore quickly terminated the operation by pressure on the bleeding-points by the gauze drain or sponges."

(2) When symptoms of concealed hæmorrhage are present it is too late to afford the patient more than a forlorn hope.

(3) The use of the drainage-tube to indicate hæmorrhage is not to be relied upon.

(4) It is best, when possible, to enucleate all cases where the hypertrophied broad ligament forms a part of the pedicle.

(5) In cases of suspected hæmorrhage the pelvis should not be elevated, for in this position the blood will gravitate out of the pelvis and collect under the diaphragm, where it is impossible to remove it without evisceration. This blood will in many cases set up a peritonitis, and it is this peritonitis which has been blamed for many deaths due primarily to hæmorrhage.

(6) That a patient may have no bleeding in the pelvis when she is in the Trendelenburg posture, because the arterial pressure is diminished; but when the pelvis is lowered, bleeding of a dangerous character may occur.

Three Successful Cholecystotomies for Gall-Stones, with Remarks Based on Six Cases.

BY WILLIAM WOTKYNs SEYMOUR, M.D.,

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Mrs. F., 27 years old, was attended by me in a lingering confinement, her first, October, 1892. Ten days later I was called to find her in agony from pain in the epigastrium, the liver border tender and the site of the gall-bladder especially so. There

were no symptoms or physical signs referable to the uterus or its appendages. My diagnosis was gall-stones, which was incredulously received; but two days later the patient was intensely jaundiced, and the patient's mother, who had had a similar attack

when my patient was born, was convinced I was right. The attacks increased in frequency and severity until there was a perfect panic in the household, especially as collapse was very marked in some of the last ones. In view of the frequency and severity of these paroxysms I advised operation. Finally, December 17, 1892, she had a terrific attack, and both patient and husband felt that another would prove fatal, and I was asked to operate the following day. A large room was speedily prepared, and the next day, with the assistance of my friends, Drs. Morris, Gordinier, Buchanan, and Webster, I operated. Ether narcosis. Incision made from tip of the ninth rib downward. The gall-bladder was found beneath the upper portion of the incision, but deep under the liver. Stones could be felt within it. Safeguarding the peritoneum with aseptic napkins, the gall-bladder was aspirated, about an ounce of bile being removed, and then it was opened by an incision into the fundus. Sixteen stones were removed from the gall-bladder, cystic, and common ducts, the gall-bladder being irrigated and then attached to the peritoneum and abdominal muscles by silk sutures, a rubber tube was introduced into the gall-bladder and the abdominal wound closed with interrupted silkworm-gut sutures. The improvement was rapid, although ether vomiting persisted twenty-four hours. At the end of forty-eight hours nourishment began to be taken in quantity. Flatus passed on the second day, the bowels were moved on the fourth day, when bile was found in the discharges for the first time in weeks. The drainage-tube was removed on the fifth day and

the wound united by first intention. The last gall-bladder stitch was removed during the fifth week, and the wound entirely healed. The patient is now in perfect health and free from the dyspepsia and constipation from which she formerly suffered.

The second case in order of narration, but third in point of time, was a large-framed German woman, a widow 59 years of age. For over ten years she had been subject to sudden severe attacks of pain which were ascribed to everything but gall-stones, until she came under the care of my friend Dr. H. C. Gordinier, who recognized gall-stones, as did Dr. Webster, who attended her subsequently. From June, 1893, she suffered frequent severe attacks, and for several weeks prior to operation she required quite three grains of morphia a day to assuage the constant pain and oft-recurring paroxysms. After a consultation with her attendant, Dr. Gordinier, I advised operation, because of the constantly-increasing weakness, nausea, and vomiting with exhausting pain. November 19, 1893, I operated in the kitchen of the patient, with the assistance of Drs. Gordinier, Donald Buchanan, and my student, Mr. Archibald Buchanan. The patient was greatly jaundiced, and besides had pronounced organic heart-disease, so ether was employed for narcosis. I made an incision parallel to the liver border so as to give easy access to the gall-bladder and duct. The belly was protected with aseptic napkins. The enlarged, inflamed, and greatly-thickened gall-bladder was incised between two forceps, and forty-two gall-stones, the size of buck-shot, removed from gall-bladder, cystic, and common ducts.

After irrigating the gall-bladder it was stitched into the wound, a rubber tube inserted, and the rest of the wound closed with silkworm-gut. Despite the large doses of morphine necessary before operation the patient never afterwards took a particle of anodyne. The bowels were moved on the third day, flatus having passed on the second day. Bile was found in the stools after the sixth day. Patient sat up on the eighteenth day, and now is in perfect health, apart from the heart affection, with wound perfectly closed.

CASE III.—Mrs. H., 59 years of age, was referred to me when lecturing at the University of Vermont, May 16, 1893. Ten years before she began to suffer from intense colicky pains in the stomach. She was treated for indigestion, neuralgia of the stomach, and *id genus omne* until she consulted the late Dr. Cram, of Ferrisburgh, Vt., who told her she had gall-stones. The attacks became more frequent and severe, so that for three years preceding operation she was utterly incapacitated for labor of any kind. For six months the patient had been harassed by constant nausea, vomiting, and pain, and by frequent atrocious paroxysms. The patient, always slight in frame, was emaciated. Her skin and eyes for five months had been deep yellow, her urine porter color, and stools white. The heart was weak, and at the base of the right lung were to be heard fine râles, but no dulness. Despite her feeble condition and the possibility of cancerous complications, I advised operation as her only hope. To this she assented, and on May 17, 1893, I operated before the 200 students of the University of Vermont

in the amphitheatre of the Mary Fletcher Hospital. The patient took ether badly, and twice I had to stop and perform artificial respiration, use strychnia, digitalis, and oxygen freely. The liver was displaced downward to within an inch of the umbilicus, and I consequently made my incision parallel to its border but slightly above. The transverse colon was found intimately adherent to the whole liver border, requiring the utmost care to separate the dense adhesions so that I could finally expose the under side of the liver. In these adhesions between colon and liver were very hard nut-sized masses of inflammatory tissues. No gall-bladder could be felt or seen, but deep down in the cavity I had made I could feel within a fold what I took to be gall-stones. Failing with Cabot's hook to incise the fold, I opened it with a scissors under the guidance of touch. A large amount of bile escaped, but was caught in the protecting napkins. With Tait's scoop forceps, and Cabot's curette, I removed 150 gall-stones varying from B.B. shot to beech-nuts in size. The cystic duct was so dilated that my index finger easily passed into the common duct.

Suturing the gall-bladder to the parietes was out of the question, so I passed a soft rubber tube into the hepatic duct through the gall-bladder and then threaded a glass tube over it into the gall-bladder, tamponning about the tube with aseptic gauze. The soft tube was displaced by an assistant and removed, leaving the glass tube in the gall-bladder. Shock was very marked, but with strychnia, digitalis, and oxygen the patient rallied well. Flatus was passed the second

day, the bowels moved the third day and contained bile. The gauze was removed gradually, the glass tube on the ninth day and a short rubber tube substituted. The patient returned home in a few weeks with a fistulous* opening which discharged freely at first, but finally gave no inconvenience.

During the early autumn I heard from the patient that she was doing her housework and felt in good health apart from a slight cough. November 9, 1893, she had a severe pulmonary hæmorrhage, but was up the next day; later she had others, and died November 19, 1893, from pulmonary hæmorrhage. Her attendant, Dr. George P. Collins, says she had no symptoms referable to the gall-bladder and believed herself cured of it.

Despite the fact that gall-bladder surgery has at last conquered a place in therapeutics, at least on a par with Carlsbad water and olive oil, there is still considerable diversity in the estimate of its various methods. As one who has been both operator and patient, I entertain very pronounced views as to the relative merits of some operations. I would not, when my life was at stake, put myself in the hands of a gentleman who wrote me that he preferred to remove the gall-bladder, and I still feel that the excision of the gall-bladder has no field save in gangrene or malignant disease. Its removal certainly does not remove the laboratory in which the stones are formed. As to doing cholecystotomy in two stages, so enthusiastically advocated by Riedel, I regard it as a retrogression, markedly circumscribing our field of action in the cases with complications which are not to be foreseen and certain to

result in incomplete and discrediting operations. Riedel's own operations show this, as in several cases stones were extruded from the fistula, even weeks after operation; a proof of incomplete work. The belly can by aseptic pads be thoroughly safeguarded against bile, and the operation in two stages has no advantages which the simple operation in one stage does not possess many times over. The incision which I employed in my first cases was the vertical incision from the tip of the ninth rib, the incision commonly employed by Tait and Mayo Robson. Twice I added a short arm converting the incision into an inverted L, but after seeing the advantages which the incision parallel to the liver border gave in a very difficult case operated on by my friend Dr. John Homans, I concluded to employ it. This oblique incision gives the most complete access to the gall-bladder and ducts of any incision of which I know, at the same time admitting of perfect coaptation with a minimum of danger from hernia. Between cholecystotomy with suture of the viscus to the parietes, as done by Tait, and cholecystotomy with suture and dropping of the gall-bladder, leaving the peritoneum undrained, I believe the advantage to lie with Tait's operation. When the gall-bladder can be sutured well, I can see not only no objection, but an advantage, if the belly is safe-guarded by temporary drainage and tamponade. If the stitches hold, the tube can be withdrawn in a very few days at least, and convalescence materially shortened. In the cases, such as my third, here reported, when it is impossible to bring the gall-bladder into the wound, or where we are obliged, after failing

in crushing or needling stones in the common duct, to excise them, we can, according to the facility with which it can be done, either suture the opening, safe-guarding with drainage, or we may simply introduce a tube into the opening and surround the tube with gauze until the belly is shut off. In a case similar to my third case one might, with Murphy's button, do quickly a cholecystoenterostomy. At that time I was not familiar with Murphy's button or I would have used it. In the cases where a fistula persists and proves detrimental to the patient's health cholecystoenterostomy ought to be done, and the most rapid method seems to be Murphy's button. Whether time will show it to be as safe as its inventor thinks, remains to be seen but I think most will agree

that his use of his button to side-track, without removing, stones obstructing the common duct is, in view of the irritative effects of gall-stones, an abuse of an instrument which promises much in its proper field. With all due respect for internal medicine, the time has come to regard gall-stones as a surgical affection; an affection which requires prompt intervention when the recurrences become at all frequent and severe. Neither Carlsbad water, nor olive oil, nor chloroform and turpentine can dissolve them when once formed, and to expose a patient to the many risks and unutterable tortures of many recurrences is downright wicked. Especially is this so when the mortality of the operations for the disease is extremely small.

Two Symphyseotomies and an Induced Labor.

BY DANIEL LONGAKER, M.D.,
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THE position of symphyseotomy in the list of obstetric operations is one of the most important questions at present engaging the minds of obstetric surgeons. Only two years have passed since the first¹ American operation was done, and successfully, in an Alabama mining town. Already the operations are numbered by scores, those of the year 1892 aggregating not far from one hundred. An operation long supposed dead and having a purely historic interest has undergone

a thorough revival, and promises to secure an early and lasting footing among the legitimate obstetric procedures. It promises the displacement of craniotomy and the Cæsarean section under the relative indication. I believe the induction of labor is likewise doomed. For the mother it is not unattended by risks of septic infection, and for the child, in marked contraction, the results are not favorable.

Since the first case has a direct bearing on this point, the notes are given in detail.

¹ ANNALS OF GYNÆCOLOGY AND PÆDIATRY, February, 1894.

CASE I.—*Labor Induced at the 32-34 Week.*—Early in January, 1892, Dr. George H. Horn referred the patient to me. She was 28 years old, a native of Saxony, the wife of a brush-maker, a Hungarian. Pregnant the third time. Both children had been born dead, the first after a greatly-protracted and severe labor, of which the doctor subsequently wrote me as follows: "About three years ago I delivered her of a dead child after she had been very long under the care of a midwife. She seems to combine the misfortunes of large children and a narrowed pelvis. If I remember correctly, she is considerably below three inches sacro-pubic. I delivered by *compressing the cranium* and sweating myself considerably."

The second child was not so large, was also delivered by forceps, and did not live.

Her last menstruation took place during the latter days of August, 1891, and on September 1 she was well. Inspection and palpation disclosed a development corresponding to the eighteenth week of gestation. Life had been felt within a few days. The woman was anæmic, neuralgic, and costive. A pill of reduced iron, nux vomica, and cascara sagrada was ordered for her. She was urged to get as much out-of-doors exercise as possible, and to subsist on a nutritious dietary. These measurements were taken: C. V. 7.5 (estimated); C. D. 9.5; D. B. 18. Interspinal 25.5; intercostal 26.5. (*Two centimetres were deducted from the diagonal conjugate because of the unusual depth and angle of inclination of the symphysis.* The estimate in her subsequent pregnancy was C. V. 7.)

She was advised to have labor in-

duced six or eight weeks before full time, and was requested to report again about the middle of March. At this time her general condition had improved, and near the end of the month an examination yielded the following data: the head was found at the pelvic inlet; the heart to the left of the umbilicus, 132 per minute. It was not possible to press the head into the pelvis. On March 30, at the patient's own home, under aseptic and antiseptic precautions, a bougie was introduced into the uterus. At the end of twelve hours, although there was little or no dilatation, there were pains and the bougie was removed. As no progress had been made at the end of twenty-four hours more, it was reintroduced. Again pains began, but another day passed and little or no dilatation of the os was accomplished, and a second bougie was introduced. These remained twenty-four hours, and at the end of this time it was possible to pass a small Barnes's dilator into the os uteri, later the medium, and finally the large size. During this time frequent irrigation with hot water and bichloride $\frac{1}{4000}$ was used, the latter being preceded and followed by hot water.

At the end of *six full days*, there was complete dilatation of the os; membranes intact; the head at the pelvic inlet, but not fixed there. The pains for sometime continued strongly expulsive without any engagement of the head. After a few hours they were less strong, and, although the patient was otherwise in good condition, it was quite clear the time for aid had come. The cervix was well retracted, and the membranes came down to and distended the vulva.

Fœtal movements were frequent and strong. Because of the high, unfixed head, I decided to make bipolar version. In this I had the assistance of Dr. Horn. Turning was easy by the two-finger method, the breech being depressed, while the head was pushed upward by my assistant. The left leg only was withdrawn,—it came to the sacrum. The expulsion was left to the maternal efforts for fifteen minutes, and the breech was on the floor of the pelvis by this time. A loop of cord was now found over the child's perineum, and during the pains its pulsation was partly interrupted. Therefore extraction was quickly completed, my assistant making efficient suprapubic pressure, while I made moderate traction, and when the contracted brim had been passed, flexion of the head by the finger on the chin and in the mouth.

The child, a male, weighed about five and a half pounds. It made automatic respiratory movements after the lapse of five minutes, and in fifteen minutes it was breathing fairly. Its cry was not strong. It was quickly dressed and placed in a baby's bath, surrounded by hot-water bottles.

A slight hæmorrhage followed the placental expression, but it yielded to compression and a hot intrauterine injection. No ergot was used. Convalescence was afebrile, and the patient took a walk of several squares on the fourteenth day. The infant died at the end of four hours. Its death was hastened, though not due to a slight hæmorrhage from an insecurably ligated cord.

The head had the following measurements: Bitemporal diameter $2\frac{1}{2}$ inches; biparietal 3 inches; occipitofrontal $3\frac{3}{4}$ inches; occipito mental 4

inches. Post-mortem examination twenty hours after death. The lower extremities were bluish; there were ecchymotic spots under the eyes, but the general surface was otherwise pale. The umbilical cord was pale and flaccid, and the dressings were blood-stained. Perhaps an ounce of blood had been lost. The abdominal and thoracic organs were healthy; there was no atelectasis. On removing the scalp two large clots were found beneath it; one covering the vertex, the other at the base of the cranium on the left side posteriorly, and extending backward from the parieto-occipitotemporal fontanelle. There was also a small hæmorrhage under the integument of the neck on the same side, just below the mastoid. It involved the sterno-mastoid muscle. The first clot was largest near the left parieto-occipital suture, the point in relation with the sacral promontory during the extraction of the head.

The same patient consulted me again, March 25, 1893. From the date of the last menstruation, as well as from the examination, she was within a month of time. At this time, I estimated the true conjugate at *two and three-quarters inches (seven centimetres)*, and not three inches, as before.

The *fœtus* was lying *obliquely* in the cavity of the uterus, and it was not possible to hear the fœtal heart sounds. The fœtal movements were strong. She was advised to go to term, and to have a symphysiotomy. It is of interest to note that the woman was opposed to the premature interruption of pregnancy. Rather than this, with the risk of losing another child, she would have a Cæsarean section. Her urine contained a trace of albumen, but repeated microscopical ex-

amination revealed no casts. I was called to attend her in labor, April 22, early in the afternoon. She was having frequent dilating pains; the membranes intact; os almost dilated; foetus transverse with a shoulder at the brim.

Dr. Charles P. Noble saw the patient in consultation. When she fully understood that the Cæsarean section was not under discussion, but another operation, our decision to etherize, make cephalic version, rupture the membranes, and divide the symphysis in case we should fail to engage the head without, was readily accepted. At the outset all preparations were made for symphyseotomy, and an aseptic delivery. There were present and assisting, besides Dr. Noble, Drs. L. D. Bauer and W. E. Robertson. Cephalic version was readily made, the membranes were ruptured, but it was evident at once that delivery by forceps was out of the question. The os was fully dilated; the head assumed a position at the brim between flexion and extension, according to the mechanism peculiar to the flat pelvis. There was a decided projection over the symphysis. Access to the post-pubic space was gained by a four or five centimetre incision, the lower end reaching down to the upper border of the symphysis. The joint was divided by a curved Galbiati falcetta, cutting from above downward and from behind forward, while the urethra was held downward and to the right side by a steel sound. Some difficulty was caused by going to one side of the cartilages, a mistake I had seen another operator make.

The divided bones at once separated, the separation finally reaching five or six centimetres; the head

promptly descended to the floor of the pelvis, where it was grasped by Simpson's forceps and the delivery completed by very slight traction. Pressure on the handles was avoided, because the head was held with one blade over the face, the other over the occiput. The head had descended in the non-flexed position in which it had engaged, as just stated.

After placental expression the uterus was flushed with hot water and the gauze packing removed from the wound. Free bleeding embarrassed us for some time; very hot water would not arrest it. It was finally found that simple apposition of the divided bones caused a cessation of the hæmorrhage. The wound was then closed with some misgivings. Iodoform gauze and absorbent cotton, with three two-inch adhesive straps encircling the pelvis, and a stout unbleached muslin bandage, secured by safety-pins and absorbent cotton to the vulva, completed the dressing. The patient was put to bed with a normal temperature and pulse of 96. The duration of labor had been ten hours.

The child was a boy, weight seven pounds. Biparietal diameter three and a half inches (nine centimetres). It was vigorous, and continued to thrive in spite of a supply of maternal milk for some time deficient in amount. The patient was seen three hours after labor and was then complaining of pain in the sacrum, which was relieved by placing a soft cushion under the right hip and buttock. Her temperature was 98.4° F. on the 28th of April; the seventh day of the puerperium it was 101°, and this was the only time she had afebrile temperature. The sutures were removed on

the 29th of April. The wound had healed. Urine was voided into a bedpan; the catheter was not used. Her appetite was good, and she was put on a liberal diet. The recumbent position in bed was maintained for four weeks, although the last was under protest, and she slipped out several times, contrary to orders. After this she attended her household duties as usual, besides taking entire care of her child. There was not the slightest disability. She was soon in better health than ever before. Plate I, Fig. 1, shows the patient and her child at five and a half months. Its weight at this time was thirteen and three-fourths pounds, almost double that at birth,—seven pounds.

CASE II.—This patient was seen at the request of Dr. Joseph B. Potsdamer, the physician in attendance, on December 30, 1893.

Her height is fifty-seven inches, she is rather stout, a decided brunette, German, age 30. She was in labor with her fifth child. I was requested to perform craniotomy. She has a parturient history as follows: The first child, a girl, was delivered by craniotomy; the second, a boy, now 6 years old, by a difficult forceps operation; the third, a girl, now 4 years old, in the same way; the fourth, a boy, by version, had his neck broken in extracting the head.

In the present labor the membranes ruptured early, nineteen hours before I saw the case; and four hours before this the patient had been etherized and delivery attempted by forceps. At first they slipped off, but finally held; yet, in spite of strong traction efforts, no advancement was made, and the attempt to deliver by this plan was definitely abandoned. The

woman was extremely nervous and hyperæsthetic, shrieking on the merest touch. Otherwise her condition was fair. Os dilatable, but undilated, and in advance of the head, which was entirely above the brim, moulded; dorsum to left; heart tones distinct, regular, and unintermittent to the left of and a little below the umbilicus. Abdominal palpation confirmed the existence of insuperable disproportion between the head and pelvis; but, as the child was unmistakably alive, I objected to craniotomy. It was at once agreed that symphyseotomy be done instead.

Preparations for the operation were completed as speedily as possible in another room, into which the patient walked at 9.45 P.M. She was etherized on the table. There were present and assisting Drs. Jos. B. Potsdamer, Joseph S. Gibb, and Alex. H. De Young, and the nurse.

The measurements of the pelvis, taken before the operation, were as follows: 7.5, 9.5, 17, 24, 26 centimetres. The symphysis is deep and the conjugato-symphyseal angle acute. For this reason two centimetres are deducted from the diagonal conjugate for the true. The technique of the operation was the same as that of the first. It required less than five minutes to divide the symphysis, and by cutting through the middle of the joint there was no embarrassment as in the first case. When the pubic bones spread asunder a profuse hæmorrhage occurred. This was permanently arrested by gauze packing.

The head rapidly descended to the floor of the pelvis in the position it had occupied at the brim, the sagittal suture approximately parallel with the transverse diameter of the pelvis.

PLATE I.

FIG. 1.



CASE I.—MOTHER AND CHILD AT 5½ MONTHS.

FIG. 2.



CASE II.—FORCEPS INJURY ON RIGHT SIDE.

[See page 454.]

FIG. 3.



CASE II.—FORCEPS INJURY UNDER LEFT EAR.

[See page 455.]

The pubic bones parted six centimetres.

As in the other cases, the bladder, anterior vaginal wall, and cervix accompanied the head in its descent. They were held back as well as could be, and the early escape of the head through the os facilitated. Ether was partly withdrawn in the hope that the natural forces would complete the expulsion, but as the foetal heart became inaudible, the delivery was completed by forceps without loss of time. The child was deeply asphyxiated, but the heart was beating slowly. It was resuscitated by Dr. Gibb. The placenta was expressed, the uterus irrigated, the gauze removed from the wound, which was irrigated by plain boiled water, and the pubic bones brought together. The finger was passed down behind the pubis to make sure that the soft parts were not protruding between the divided bones. The post-pubic space was again irrigated, and the wound closed by interrupted silk sutures. Iodoform gauze and absorbent cotton and three two-inch adhesive straps completed the dressing. From the commencement of the anæsthesia to the delivery of the child was just one hour. The patient's pulse when put to bed was 108.

The child was a girl weighing 10½ pounds. Head measurements:

	Centimetres.	Inches.
Bitemporal	7	(2¾)
Biparietal	9	(3½)
Occipito-mental	14	(5½)
Suboccipito-bregmatic .	9	
Fronto-mental	10	(4)
Occipito-frontal	13	(5¼)

The very long fronto-mental diameter, due to the flattening of the head, is worthy of note.

The child had two bad wounds from the original forceps operation, one on the right side of the forehead, the other on the left side of the neck, below the mastoid, and extending forward towards the angle of the jaw. In a week the sloughs separated, and the pericranium and bone, as well as the muscles of the neck, were exposed.

Subsequently a pustular eruption covered the head and upper part of the body, the child developed bronchitis, and died with wounds unhealed just four weeks after birth.

Plate I, Figs. 2 and 3, show the size of the child as well as the location of the wounds. They were taken on the day following delivery.

December 31. At 11 A.M., pulse 96, temperature 99° F. No pain. There was partial incontinence of urine. Before the nurse could place the bed-pan it would be voided into bed. This disability disappeared at the end of a week.

On January 8 her temperature was normal and condition otherwise good. She was nursing her child, and had a good appetite. After some days fever of remittent type developed, 105° F. being reached on one occasion. There were no chills, the patient sweat much, there was loss of appetite and strength. The cause of the trouble was an extensive bed-sore over the sacrum. It extended down to the bone. As soon as the cavity could be properly disinfected, the temperature remained normal. Peroxide of hydrogen, corrosive sublimate, and solution of chlorinated soda were used. The last seemed to answer best of all, and with least harm to the granulations; $\frac{1}{16}$ was the strength employed. The woman was sitting up in four weeks,

but it required fully another month for the large cavity to fill up.

The patient was examined at the end of seven weeks. She walked without pain or any difficulty. While standing and swaying from foot to foot there was no appreciable motion in the pubic bones backward or forward. Upward and downward there was about one-half centimetre. Lying down and swinging the legs and thighs, the up and down motion was one centimetre, while backward and forward no movement was perceptible.

This examination was made according to the plan suggested by Dr. Robert L. Dickinson.¹

The sole, serious complication in this case was the bed-sore, and this resulted from inefficient nursing. The primary rise of temperature was slight and due to the traumatism inflicted by the original forceps operation. No trouble was caused by the symphyseal wound. The child's death cannot in any way be attributed to the symphyseotomy, which must be considered a complete success.

There is little doubt that this 10½-pound child could have been safely extracted after craniotomy, and that the patient would have been about much sooner had this operation been done. And yet I cannot regard the decision against it a mistake.

The second symphyseotomy belongs to the class of unfavorable cases which contributes most of the failures in this operation as well as in Cæsa-rean section. Emergency operations, undertaken after labor has been inaugurated many hours, the waters drained away a long time, the uterus perhaps in tetanic contraction with

cervix bruised and lacerated by ineffectual efforts at forceps delivery or version, certainly form a distinct group which ought to be kept separate in any statistical computation. Fatalities ought not to be attributed to an operation when they are brought about by and incident to the very conditions under which the operation is done.

The two maternal deaths in Dr. Harris's list of fifty Italian operations belong to this group. There are twenty-seven in order without the death of a mother. Pinard,² in December, 1892, was able to present the clinical histories of thirteen cases operated on during that year. All of the mothers and ten of the infants were shown alive and in good health.

Induced Premature Labor.—The repeated introduction of the bougie into the uterus, sometimes necessary, cannot be regarded as a procedure entirely devoid of risk. As a matter of fact there are accidents and deaths directly attributable to this operation. The weight of this as an argument against it is only fully apparent when it is remembered that such cases are, as a rule, in good condition and in the hands of obstetric surgeons. Grant these conditions in symphyseotomy, and I believe the maternal mortality will not be any higher. Bearing in mind the relatively large number of children that perish during or soon after delivery, premature labor can be looked upon with but little more favor than craniotomy. No doubt many infants born six to eight weeks prematurely, survive and grow up to maturity, but I believe an equally

¹ Medical Record, November 25, 1893.

² Year-Book of Treatment, 1894, p. 357.

large number do not. When they are compelled to pass through a three-inch pelvis 7.5 (centimetres), the risk of immediately fatal injury is considerable. While we are not in a position to declare against the operation unqualifiedly at present, it seems to me the considerations just presented compel a great restriction of its application. It might be resorted to where a foetus, above the normal in size, encounters a slight contraction and a few weeks before term. If the opportunity is lost, there remains only symphyseotomy so long as the child is alive. Below three and one-quarter inches (8.2 centimetres) we ought to rely on this as the deliberate choice. Unless the full-term child be very much under size in its cephalic diameters, this degree of flattening will offer an obstruction otherwise insuperable or to be overcome only at some risk of serious if not fatal compression of the child's head and at some risk to the mother. The suggestion has been made to increase the range of symphyseotomy by inducing labor prematurely. I believe this unwise, since a conjugate narrowed to two and one-half inches or near that point is, as a rule, found only in a pelvis generally contracted. All the objections made against premature labor remain. My own personal decision would be not to employ symphyseotomy when the conjugate is below (6.7 centimetres) two and three-quarters inches, but to regard the case as one demanding delivery by Cæsarean section under the absolute

indication. In Dr. Charles P. Noble's unique case symphyseotomy has twice received the preference over induced labor, and the woman had been delivered once by the latter plan, and that successfully.

Cephalic version is not a difficult operation so long as the membranes are unruptured. Its advantages over pelvic version are greater safety for the child and less risk of laceration of maternal soft parts.

I believe it is preferable to have a vertex presentation, a point on which stress is laid by Pinard.¹ Forceps should not be applied until the head has passed through the os, and not until bladder, anterior vaginal wall, and cervix have been retracted. In every case I have thus far seen these structures accompany the head in its descent to the pelvic floor. In one the forceps were applied early, and the head could be seen passing through the os outside of the vulva. Manually we can supply the support which is lost through the spreading asunder of the divided pubic bones, thus there will be secured less disturbance of the anatomical relations of the post- and infrapubic regions, earlier escape of the head through the os uteri, and less danger of laceration. Failure of foetal vitality would indicate speedy extraction of the child by forceps even before descent and escape of the head from the os uteri.

¹ Year-Book of Treatment, 1894, p. 357.

Injuries to the Pelvic Floor and their Immediate Repair.¹

BY GEORGE M. BOYD, M.D.

THE only excuse I have for bringing this subject before the Society for discussion is the fact that too often the physician, being already much occupied in possibly holding a poorly contracting uterus or resuscitating an asphyxiated infant, fails to make the careful examination so essential to the recognition and proper treatment of injuries to the pelvic floor.

There may be possibly some plausible excuse for this oversight, the irregularity of obstetrical work and uncertainty as to when he may be called upon to make this repair deprives him of the hours of meditation and painstaking preparation so essential to the clean operator. He is called upon at the eleventh hour, tired from loss of sleep to take charge of this, the last act in the play of reproduction.

That these injuries are not always recognized, and if recognized, not intelligently repaired, is evident from the cases brought before us in clinic and private practice suffering from the *various causes* necessitating the secondary operation.

It is my purpose in this paper to report these accidents treated in the Philadelphia Lying-in Charity for the past three years, to mention some of its causes and describe our method of treatment.² From April, 1890, to April, 1893, there were 721 women delivered in the hospital, and I find a

record of 117 cases of injuries of the pelvic floor needing some repair. One hundred and seven operations are reported with a good result. Ten with an imperfect result. This somewhat high percentage of injuries is accounted for in several ways. The majority of the cases were first labors. Four hundred and forty-eight cases of the 721 delivered were primiparous. Careful examination was made in every case after the labor was completed (this report including all injuries noted, some only slight, requiring a single stitch). The hospital being very centrally located, and with open doors ready to receive whatever a *cab* or the *police ambulance* may bring, a woman is admitted in the second stage of labor, another is removed from cab, infant already born, placenta still retained, still another in which labor is completed in the waiting-room; and I could mention a case in which labor was precipitated by her hurry to reach the hospital. Is it surprising, then, if we report five deaths in a 1000 cases delivered, and does it explain some of the vaginal and perineal tears found? Until all maternities can select their cases, then only can their statistics be of much comparative value.

Conditions existing or character of work done being different, maternal mortality, necessarily higher or lower. If meddlesome midwifery was not practised, the cases I report were injuries brought about by causes unavoidable. The hospital follows a

¹ Read before the Obstetrical Society of Philadelphia, April 2, 1894.

² I am indebted to Dr. W. K. Wilson and Dr. Oliver Hopkinson for the privilege of reporting their services.

conservative course in the treatment of its patients. Every labor is left much to nature. The forceps are used in about six per cent. of cases. Anæsthetics are used little for other than the obstetrical operations. Ergot is used in exceptional cases (in my own service not at all.) The jacket-ban dage and binder are used in all cases. Finally, the fundus uteri is held by a nurse for one hour from the completion of the third stage of labor.

That the forceps is the cause of many tears I believe, and I find in the forty-two operations reported a confirmation of this. In my experience we have a new factor in the axis traction rods of the modern forceps, —as a cause of these injuries. Let us be mindful that while we are making traction in the axis of the pelvic canal that we may be also producing, by pressure, serious damage to the pelvic floor. Is the use of the bichloride antepartum douche a cause, —washing away the natural secretions and producing a dryness and rigidity of the soft parts, as it is claimed by some? If this is the case, then we have an explanation of many of the injuries I have reported, for in all cases where the first stage of labor was not completed before admission, the patient was given a 1-4000 antepartum douche. Should the discussion favor or oppose its use, because of this danger, even then I should feel compelled to use it as a prophylaxis against gonorrhœal ophthalmia and septic infection.

The extent and location of laceration found is of interest, and show how apt they are to be overlooked, unless careful examination is made. Although I find no record of a complete tear involving the sphincters

and rectum, the pubic segment of the pelvic floor was frequently the seat of laceration to the right or left of the clitoris extending up the vagina. Lateral vaginal lacerations, sometimes an extension of the median injury often found when no apparent damage to the perineum was observed,—these are irregular tears extending up over one or other or both sulci of the vagina,—some superficial, some deep, demanding anæsthesia, careful exposure of parts, and a somewhat tedious operation. The scissors are often needed to trim the edges of the wound. Separation of vagina from vulva was noted several times.

The most frequent injury was the perineal median, extending a short distance up the vagina, demanding from three to eight stitches.

Can the pelvic floor be protected from injury by any method of support from without? Perineal support seems of no service in our experience, except when extension of the head was favored by pulling the rectum forward. Direct pressure or guidance of the presenting part in some cases seemed beneficial.

I once felt that I was in ignorance of the secret of protecting the perineum, hearing how one by this or that method was successful, or how he saved it by using the forceps, but have concluded long since that as Dr. Goodell states in his "Lessons in Gynæcology,"—

"Some place their hand transversely across the perineum; some longitudinally, with the fingers looking downward. As runs our nursery rhyme: 'Simon says, 'thumbs up!' Simon says, 'thumbs down!' and yet the perineum tears, and tear it will, until woman becomes—like the cher-

ubs of the old masters—all wings and no body.”

Treatment.—As you have observed, it is the custom in the hospital to repair about all injuries found, not that the slight injuries would have left permanent trouble. But from the standpoint of infection, is it not wise to make the repair if only one stitch brings together a wound which otherwise would remain gaping? I believe that in the operation anæsthesia to the surgical degree should be more generally used. It is impossible otherwise to make examination and repair as carefully.

Frequently premeditating a laceration, I have had *ether* or *chloroform* in readiness, and with the evidence of injury commenced anæsthetization; by the time the third stage of labor was completed the patient was fully under control, avoiding the delay and explanation to patient of injury done, with her possible refusal to have the repair made. This is a small matter, but I believe an additional indication for the use of anæsthetics in the second stage of labor. The patient should *not* have the privilege of deciding what should be done. It is a question of duty on the part of the physician.

Anæsthetized, she should be placed across the bed in the lithotomy position, or better (if the bed be a large one, as is usually the case in private practice) remove her to an improvised operating-table. With legs completely flexed by the “bein halter,” or some other simple method, with nurse at ether, and an additional assistant (possibly one of the family), the operation can be performed. The Kelly perineal pad is of great service in protecting table and floor.

The field of operation douched to

wash away all clots, constant irrigation, if possible, by the fountain method is very valuable for careful placing of sutures, and should be used. A cotton or gauze tampon with a string attached should be pushed up the vagina to prevent flow of blood from uterus interfering.

The suturing should be done from within out, beginning at the upper angle or angles of lateral vaginal tears, and continuing down until the posterior commissure of vulva is reached, *then* the first skin suture should be introduced in the perineum, as is the crown stitch of the Emmet operation. Bringing the vaginal laceration and vulva together, it better unites the torn muscular fibres of the lavator ani. The selection of suture material is of some importance, and we have found in our work that Chinese silk is best of all.

Better than catgut because it is elastic, the knot is uncertain, and material hard to sterilize.

Better than silkworm-gut because if tied the stiff ends of suture were constantly sticking patient, interfering with proper catheterizing and post-operative douching.

Chinese silk is easily sterilized. The knot will stay; it is soft, and, if black silk is used, easily seen for removal. A matter of no little importance.

After operation patient should be kept rigidly quiet,—catheterized every six or eight hours,—given bichloride douche, 1 to 8000, daily.

The use of vaginal suppositories of iodoform is of much value. Better than the suppositories made with cocoa-butter, is a pencil, 4 to 5 centimetres in length, made of iodoform, grs. xxv, and sufficient starch and

acacia to make the mass, when dry, hard, not easily broken. The advantage of the pencil over the suppository is that while the suppository will dissolve within one hour and iodoform possibly escapes, the pencil will dissolve more slowly, requiring twelve hours. The pencil is also of advantage when we desire to carry iodoform into the uterine cavity. The ordinary suppository melting or breaking to pieces in the grasp of fingers or forceps.

With careful immediate repair of injuries to the pelvic floor, placing the sutures intelligently, 90 per cent. of cases will be cured, and we will remove the doubt which exists among some of us, who may feel that the primary operation is not as successful as the secondary.

In conclusion, I would state that,—

First.—As every obstetrical case is greatly a mathematical problem, so is the safety of the pelvic floor; if the passenger is too large for the passageway (something must give), a tear, either vaginal or perineal, will follow.

Second.—As it is our duty to study all obstetrical cases before labor by palpation and pelvimetry, just as much is it our duty to examine the perineum and vagina after labor.

Third.—That having any injury to the pelvic floor, it should be at once repaired, and a good method to follow is to perform the operation under constant irrigation, using sterilized Chinese silk for sutures, and avoiding infection of wound by placing the stitches without inserting the finger in the rectum.

The Tat Shang Pin, or Midwifery Made Easy.¹

BY JOHN G. KERR, M.D.,

CANTON, CHINA.

[CONCLUDED FROM PAGE 333.]

(25) SOME one may say, "According to your teaching, there will never be any difficult labors." I answer, there will be occasionally. Difficult labors may be caused by the weakness of the mother, or by insufficient nourishment of the womb, or by a deficiency of blood and spirits. They may be owing to the injurious effects of cold and fever in the womb, or unrestrained passions and excessive sexual indul-

gence. They may result from improper diet, such as things seasoned with ginger and pepper, or fried in oil, or heating things in general, the poisonous vapors of which injure the womb, and, lastly, they may be caused by a fall or blow. In all these cases the child is killed in the womb. Except the above-mentioned cases, there are no hard births. During the cold blasts of winter, when icicles form, the poor people suffer for want of clothing and fire, and the blood becomes chilled and interferes with

¹ Translated from the Chinese by John G. Kerr, M.D., Canton, China. Presented to the Obstetrical Society of Philadelphia, February, 1893.

labor. To these may be added sitting on the tub too soon, or remaining there too long without clothing. These calamities may be avoided if the patient will lie down quietly and cover up warm.

(26) One of the dangers attending childbirth arises from the cold of winter. When the child is born, it may not be able to cry, or it may be already dead. It should be quickly wrapped up in cloths, and the cord then burned off with perfumed oil-paper, which will cause the warmth to enter the stomach, and life will be manifested by the return of the voice. If the cord has already been cut, the child must die.

(27) Some one may ask, "How is the diet to be regulated previous to lying in?" I answer, that at this time there is oppression at the heart, pains in the stomach, and the spirits languish. The mouth has lost its relish, and it is important to provide palatable food and drinks. Fatty and oily things are to be avoided. If there is no appetite, soup of chicken, duck or pork, from which the oil has been taken, are to be administered frequently. This will strengthen the body and nourish the spirits. Because it is regarded as nourishing the life, she must not be one day without it.

SECTION 3.

(1) *Regulation of the Lying-in Room.*—When the period of confinement has arrived the old people must select two of those quiet, steady persons to be in attendance. There must not be too many, and it is better that they be relatives. They must with pleasant words request persons not to enter the room. In hot weather it is important not to have too many in

the room, for the air becoming vitiated will be bad for the patient, and will cause giddiness, the evil effects of which will not be small. All persons in the room must walk lightly, speak gently, and must not indulge in much talking, in order that the patient have quiet repose.

(2) It is of the first importance to exhort the patient to dismiss all fear, to be quiet, to bear the pains, and not to be tossing about. Any remarks about strange and alarming things are especially to be forbidden, also whispering or sighing, for all these things cause her to be in doubt and troubled, and may result in evil.

(3) Everything in the room must be kept quiet, and in the patient's presence there must be no worshipping of the God, or making vows or invocations of heaven or earth.

(4) The midwife must enter the room alone, sit down quietly and not make confusion.

(5) A little food must be given to the patient frequently, such as chicken or duck, or the stomach and lights of hogs; but a little clear broth is better.

(6) In winter a fire must be made in the room to dissipate the cold, and in summer a large quantity of well-water must be placed to absorb the heat.

(7) Some one may ask, "What is the cause of false pains?" I answer, that at the seventh or eighth month, the arms and feet and five viscera are all formed, and are capable of motion. If there is heat of the womb, or if the mother is irregular in taking exercise, the child may become restless, and the excessive motion will cause pain. It is not to be considered strange if this happens in five out of every ten cases. It is only necessary to return

to regularity of habits in eating and sleeping, and after one or two days all will be right. But if the pains continue, one or two doses of quieting medicine are to be given, and they will be certain to stop. A few days after this, perhaps a month, and sometimes three or four months, the delivery will be accomplished.

(8) If a woman brings on premature delivery by sitting or standing all day without rest, or by binding the body or pressing the stomach, or by pulling the child out with the hand, or by forcing it with medicine, then in nine out of every ten cases, both mother and child will perish. Who can tell the miseries endured? All the difficult labors in the world result from such causes because the womb is imperfectly nourished, and the spirits and blood are not preserved. It is just like splitting open an egg to get out the chicken, or tearing open a cocoon to get out the butterfly. How can they live? But some will say that it is difficult to nourish an infant. Who is there so ignorant as not to have discovered this, for they are liable to be affected by cold, and to suffer from improper food.

(9) Some one may ask, "How are false pains to be known?" I answer that it is only necessary to notice the kind of pain. When the full time has come, each successive pain is more severe, but false pains are slow and irregular.

(10) It may be asked, "How is one to distinguish between the effects of taking cold and of improper diet?" I answer, that the effects of improper food may be known by the pain being located exactly at the navel: it is more severe on pressure, and there may be a lump on one side of the

navel. If the pain results from taking cold, it is below the navel, and continues without increase or diminution. Warm fomentations will ease it a little.

It may be said that "the persons who have false pains are very few." I answer, the cases are numerous. If it is asked how I know, I answer that it is shown by the fact that difficult labors are numerous.

It may be asked, "if great damage will not result from mistaking false pains for true, and *vice versa*." I answer, there will be none, because, when the full time has come, the child will come out of its own accord. If it appears to pass the time, it may be dropped in the pantaloons, or born in the bed. It is thus plain that there can be no damage.

SECTION 4.

(1) *Examples*.—The wife of *Po Wa*, the third son of the Mandarin, *Fok Shan*, was young and robust. In every pregnancy she was delivered at the eighth month. After each confinement she suffered excruciating pains for several days, and her children died when a year old. I told her that the next time she must let me know. The next year she was taken in labor at the eighth month, and when on the third day it was not accomplished, they suddenly thought of my words, and messengers flew to call me. When half-way to the house, we met sedan chairs going for her parents, that they might see her before she died. When I arrived it was already dark; I found her gasping for breath, and on examining the pulse discovered that it was still in connection with the viscera. I questioned the midwife, and she said that the child's head was at the

outlet, but that it could not be born. I required her at once to lie down quietly, put an end to all confusion, and gave her some anodyne medicine. In the morning her husband came out smiling, but did not speak. In answer to my questions, he said all was right. I remarked that last night the child's head was at the outlet, but how is it now? He replied, it cannot be felt. Laughing heartily we parted. One hundred and twenty days after this, or at the end of twelve full months, she gave birth to a son, and they called me his father. He is now 8 years old. It is now evident that formerly the children had been prematurely taken away by force. It is fortunate that the mother was young and strong, for she owes her safety to this.

(2) Once, when on a visit to Mr. Cheung's house, a literary graduate, whose surname was Sing, requested me to visit one of his concubines who had been in labor two days, and could not be delivered. In this case I also gave the anodyne medicine, and after seventeen days she gave birth to a daughter.

(3) Mr. Tai, who was a near neighbor and intimate friend, had a brother whose wife had three sons at one birth. The mother and children all died. Again, one of his concubines became pregnant, and being very large she was in great anxiety. At her confinement I caused her to lie down quietly, gave her the anodyne medicine, and she was delivered every twelve hours of a child, until three were born. In the 48th year of the Emperor Kanghi, the Governor-General, Ip, communicated this case to the throne.

(4) The wife of Mr. Chan was in

labor nine days and nights, and could not be delivered. When her breath was almost gone they sent to me for medicine. They informed me that the head was at the outlet, but could not be born. I ordered them to make her sleep and then come back to me for medicine. I afterwards gave her the anodyne draught, and on the next day she was delivered, both mother and child being saved. From these cases it is evident that bearing down will cause the child to be crosswise in the womb, for how else could it be suspended for ten days without being delivered.

(5) There was also a woman in labor, and the arm having come down could not be returned. The midwife was about to cut it off when I, hearing of it, was moved with pity and hastened to her. After making her lie down quietly, I gave her a large dose of the anodyne decoction. The arm was gradually drawn up, and the next morning she was delivered. The arm was black, but in a few days it all disappeared.

SECTION 5.

(1) *On Nourishing the Womb.*—It is of the first importance in nourishing the womb to restrain the passions, and, if this cannot be done, to limit them. When lust is moderated, the heart is undisturbed, and the spirits of the womb are more quiet. When the womb is at rest it is more favorable for the nutrition of the child; it will be more easily delivered, and will be healthy and long-lived. In nourishing the womb it is best to be moderate in doing work. Look at the females in the country, the servants, and those of the lower orders. They suffer very little from diseases of the

womb, because labor promotes the circulation of the blood and spirits, and gives strength to the bones and muscles. When the womb is accustomed to motion in the abdomen a slight fall will not be followed by an injury. If one lives in luxury and ease the bones and muscles are weak and delicate, and the circulation is sluggish. Any accident to such persons is immediately followed by falling of the womb.

(2) It is not advisable after conception has taken place to begin taking hard exercise, but in ordinary times ease should not be indulged in. If one accustomed to ease begins to work after conception she will injure the womb, for the bones and muscles cannot then gain strength and firmness. Mrs. King Keung's family had a hundred carriages, but she wove cloth when she was advanced in years. Therefore females in moderate circumstances should be diligent in their work, and they will thus avoid such diseases. As soon as one is aware that conception has taken place, she should take a strip of cloth seven or eight inches wide and long enough to go around the body twice. This is to be taken off when labor begins, but if the pains are false let it remain. There are two benefits to be derived from this bandage,—first, before the abdomen is enlarged it gives strength to the back, so that no injury will result from a fall; second, it keeps the abdomen confined, so that when it is taken off at the time of delivery the abdomen enlarges and allows the child to turn with more ease. The females of my town are acquainted with this plan, and it is my desire to make it known everywhere.

(3) After conception one must avoid

sleeping always on one side, but must change frequently, so that the child may become accustomed to lying both on the right and left sides. Then at birth it will not be difficult for it to come out by the middle road.

SECTION 6.

(1) *On Diet and Drinks*.—All the books have prescriptions for strengthening the womb, and it is not necessary for me to dwell on them; but none of them treat on diet. I therefore add a few words on this subject. The diet must consist of light and simple things, avoiding those that are fat and rich. It must be moderate in quantity and digestible in quality. The more delicate and common articles are to be preferred, while the heating and burning are to be avoided. Green herbs and white rice are nutritious, but there are many poor families who cannot afford these. The wealthy, who indulge to excess in rich and delicious food, will not attend to directions. I have made out a bill of fare for them, neither too rich nor too spare, as follows: The stomach and lights of hogs, chickens, ducks, fresh fish, dry fish, sea-slugs, white cabbage, grains, oil of sesamum, beans, bamboo roots, root of water-lily, etc. All these things are to be prepared in a simple way, and the use of them in soup is to be preferred. Frying in oil is to be avoided. The above directions are designed chiefly for the rich, but stomachs that are accustomed only to vegetables should have fat and delicate food to strengthen them. After the sixth or seventh month the oil of sesamum and bean-skin must be much used, and one need not fear to use them every day. The oil of sesamum disperses poison,

and the bean-skin lubricates the womb. Rich and poor must use these, because they are esteemed the very best. After 200 or 300 pieces, the head can be delivered with perfect ease. The oil of sesamum must not be heated.

(2) The following things are not to be eaten: Pepper, ginger, things fried, wild meats, unusual delicacies, liver of pig, flesh of the dog, camel, mule, and horse, animals that die of themselves, pig's blood, crabs, the kap fish, shrimps, and eels. Practise moderation in eating and drinking, and do not carelessly take medicine.

(3) There are also other things to be avoided during pregnancy. The woman must not see the slaughtering of animals, nor the execution of criminals, nor any such thing. She must not look at the repairing of houses, nor the first breaking up of the soil. She must not see terrapins nor white rabbits.

SECTION 7.

(1) *Abortion*.—The treatment of abortion is the same as after delivery at full term. The book called *Piu Chan* says that abortion must not be lightly regarded, but that ten times more care must be taken than after a proper birth. Dr. Sit Lap Chai says that abortion is much more serious than a birth at full term, for the latter is like a ripe melon falling from the vine, while abortion is like tearing off the skin and cutting off the roots. Many of those who make light of it die: abortion is followed in a few days by fever, the face is flushed and the eyes red, and the mouth parched with intense thirst, especially at night. This is disease from weakness of the blood, and tonic medicines must be taken. If the case is mistaken for one arising from cold and medicines

of a cooling nature are given, the patient must die.

SECTION 8.

(1) *The After-Treatment*.—All the books treat plainly of the management after delivery, and it is unnecessary for repetition here, but I have selected a few of the most important points which are overlooked, so that they may be presented, and a selection can be made for all.

(2) After the child is born, the patient must get on the bed and recline on a high pillow, but is not to sleep. Her knees are to be flexed and she must drink a cup of child's urine. Let her close her eyes and rest quietly but not sleep, lest this should exhaust her and impede the circulation of the blood, which would cause giddiness. The attendants are not to disturb her by loud talking.

(3) The wind must be excluded from all sides, and whether there be pain or not, she must drink a mixture of whiskey and boy's urine, a dose of which is to be taken three or five times a day for three days, but care must be taken not to give too much whiskey. This is all that need be done if there is no unusual sickness.

(4) In order to prevent stagnation of the blood after delivery, and to concentrate the spirits, take the iron pan of a balance or the white stones of a running stream, make them red hot and put them in vinegar, and then let the patient inhale the vapor which rises from it. This also has a cleansing effect. It is to be repeated three or four times daily for three days.

(5) If there should be great uneasiness and unconsciousness from the settling of bad blood at the heart, take a handful of scullions (in winter

use the root), cut them fine, and steep them with hot vinegar in a teapot. Then lift up the patient and place the spout near her nose.

(6) It is a matter of great importance as to the future destiny of the father, whether the children be male or female, for the male descendants are the managers of the ancestral worship, but females have nothing to do with it. It is no uncommon thing for a mother to have a succession of female children, and when this is the case the husband should not come about the bed fretting and scolding, and thus cause her to be sad and downcast. I have seen a stupid man get angry and scold, until his wife was taken sick and died. The husband may be either merry or displeased, but every one should encourage a woman during pregnancy. There are some who destroy their female children, but such heartlessness is a violation of correct doctrine and their descendants cannot prosper.

(7) In the after-treatment the customs of different places are not the same. In one place they use red sugar, in another *Shau Cha*, in another *Ng Chaü-ü*, and in another pepper boiled in water, but none of these is as good as the mixture of boy's urine and whiskey. For pain in the stomach, the infusion of *Shang Fa* is infallible.

(8) The diet also varies in different places. It is the custom in *On Fai* to give fat chicken and fried rice as soon as the child is born. It is the custom in *Ng Sim* to give vegetable soup, and after the month, to allow animal food. This is not only wrong, but the inconsistency excites a smile, for in *On Fai*, soup is their only food all the year, and it is very wrong to give fat chicken and fried rice after

confinement when the stomach is weak. Little injury, however, is said to result from it. In *Ng Sim* they use rice all the year, and after delivery, when the appetite is weak, they should have good food to nourish the blood and spirits, but, on the contrary, they give them vegetable soup. It is thus that people become the slaves of custom, and are not open to conviction when taught better. My opinion is, that serious injury results from these things, but they will not examine them. The consequences are weakness, fevers, and coughs, which are serious disorders. When the blood and spirits are dissipated, it is necessary to give immediately large doses of ginseng and lungwort, but if *Tszyan* is given to remove the fever which follows difficult labor, the patient must die without being able to say it was wrong. Alas! Alas!

(9) Some one may ask, "How then is the proper way to manage the after-treatment?" I answer, there is a time to eat congee and a time to eat rice. For three days chicken soup, blowing off the oil, may be used. Within ten days pork is not to be eaten, and for the first month lard is not to be used, because these things obstruct the blood-vessels, so that the blood and spirits cannot circulate. It is only necessary to forbid the use of these things.

(10) Hen-eggs dissipate bruised blood and generate new, and, therefore, great benefit is derived from their use, but they must be thoroughly cooked. Boiling from morning till night is not too much. Soft-boiled eggs do injury by causing obstructions, and must not be eaten. Duck-eggs are forbidden.

(11) Some one may ask, "Is it necessary to avoid oil and oily sub-

stances?" I answer, it is not only necessary to avoid oily things, but too much salt must not be used, because a clear and insipid diet is natural and nourishes the spirits, while that which is heavy does not.

(12) Some one may ask, "What evidence is there to support your practice?" I answer, a trial will be sufficient evidence. Let a lying-in woman drink weak wine and eat fresh food, but if she eats salt food and drinks strong wine, they will cause fever and dry up the milk. It will be very wrong to imitate the women of *Ng Sim* and eat vegetable soup.

(13) When the child is dead in the womb, the Buddha's hand-powder is to be used. If delivery is not accomplished, give a dose of the *Ping Wai* powder, to which a little peppermint has been added, which will at once bring on an easy delivery. The prescriptions of the ancients have a subtle efficacy, and having been often tried, do not deceive us. It is not well, therefore, to be trying strange and wonderful medicines, thus endangering the patient's life.

(14) Some one may ask, "How is the death of the child to be known?" I answer, that when the mother's face is red and the tongue green, the child is dead. If the face is green and the tongue red, the child is alive, but the mother will die. When the face and tongue are both green, the mother and child will die together. In cases where the child is dead, the falling of the womb, dropsy, bruises, and pain are very different from what they are in ordinary deliveries.

(15) Some one may ask, "If the after-birth does not come away, what is the cause?" I answer, that it is because the birth has been forcibly

brought on too soon. During labor, the joints are forced apart. In strong persons they close up in a few days, but in weak persons a month is required. Now if the delivery is forced before the joints naturally open, they will close up again suddenly, so that the after-birth cannot come away.

(16) Some one may say, "We have heard that this is very dangerous." I answer, that there is no occasion for fear, and it is unnecessary to take medicine. When the after-birth does not come away, tie a hemp thread to a fold of the cord and attach a weight to it to keep it from going back. Then cut the cord off short. In from three to five days the placenta will shrink up and come away.

(17) The patient must be plainly told not to be alarmed, and that she must not listen to the midwife who will want to take it away with the hand, which would be the cause of much damage.

(18) When the milk is insufficient for the child, it is owing to the thinness of the blood. This will be the case when there has been excessive hæmorrhage or sickness during pregnancy, or when the family is poor, or the patient a servant, and for want of proper food the blood is impoverished. Sometimes when the mother is 40 years old, the blood naturally becomes thin. In all the cases the milk will be insufficient. The use of the infusion of *Tung Mak* is a specific for producing milk. The *Chün Shau Kap* and *Wong Pat Lau* have been tried, but are of no use. They may force the breasts, but the milk will be thin, and the child cannot live long. They also injure the constitution and cause disease, and it will not be long before there is no milk.

Exhibition of Specimens.¹

BY W. EASTERLY ASHTON, M.D.,

PHILADELPHIA.

First Specimen.—An appendix removed from a patient 30 years of age, who had suffered for six months with pain and tenderness in the right iliac fossa. The appendix was adherent to the brim of the pelvis. It was thickened and enlarged, and contained a small faecal concretion and fluid faeces. Bacteriological examination of cultures from the interior of the appendix showed the *bacillus coli communis*.

Second Specimen.—An appendix from a patient 48 years of age, who had suffered for eleven days with pain and slight abdominal tenderness. These symptoms were not localized. No diagnosis was possible. An exploratory abdominal incision revealed the appendix adherent by its tip to the brim of the pelvis. The fin of a fish was found lodged at its extremity. A microscopical examination showed that it would have been but the question of a short time before the formation of pus.

Third Specimen.—An appendix removed from a patient 25 years of age, who had three attacks of appendicitis in 1893. At the time of operation there were no subjective or objective symptoms present. The appendix was found buried beneath firm and dense adhesions. There was a large perforation at its base, around which

was an abscess cavity containing about fifteen drops of pus. Bacteriological examination of cultures from the interior of the appendix showed the *bacillus coli communis*.

Fourth Specimen.—An appendix from a patient 42 years of age, who had suffered for two or three years with pelvic disease. Bacteriological examination of cultures from the interior of the appendix showed nothing.

Fifth Specimen.—An appendix from a patient 32 years of age, who was suffering from pelvic disease. The appendix was thickened and contained semifluid faeces. Bacteriological examination of cultures from the interior of the appendix showed the *bacillus coli communis*.

Sixth Specimen.—An appendix removed from a patient 45 years of age, who had pyosalpinx. The tip of the appendix was adherent to the pus-tubes. Its extremity was gangrenous. From cultures taken from the interior of the appendix the *bacillus coli communis* was found.

Seventh Specimen.—An appendix from a patient 22 years of age. It was adherent and contained a faecal concretion and semifluid faeces. Bacteriological examination of cultures from the interior of the pelvis showed the *bacillus coli communis*.

Eighth Specimen.—A large uterine fibroid containing a foetus at four months.

¹ Read before the Obstetrical Society of Philadelphia, April 5, 1894.

Ninth Specimen.—An inverted uterus removed by the vagina from a woman 40 years of age. Her youngest child was 16 years old. The patient gave a history of hæmorrhage for two years.

Tenth Specimen.—A large, soft uterine myoma from a woman 53 years old.

Eleventh Specimen.—Large fibroid tubes removed from a woman 32 years of age.

Retroversio Uteri.¹

BY J. A. FREEMAN, M.D.,

MILLINGTON, ILLINOIS.

THIS is the most common of the uterine displacements, and the initial cause of a large proportion of the nervous troubles incident to the life of the human female. I say human, because such a difficulty cannot occur in the brute creation, for the reason that their anatomical construction does not admit of its occurrence. The anatomical construction and relation of the organs of the human female also indicate that, had the human family always kept up its original normal method of locomotion, the trouble never could occur in the human female.

The manner in which the uterus is suspended in the body shows conclusively and indisputably that it was designed that the body should habitually remain in the horizontal position. The construction of the venous system corroborates this idea also. The valves in the veins of the limbs are for assisting in supporting the columns of blood in their dependent position, and the valves in the intercostal veins are so situated as to assist

the venous circulation when the body is in the prone, horizontal position, and only in that position are these valves necessary or useful.

There are no valves in the hæmorrhoidal veins, nor in the large veins in the abdomen nor trunks, for they would not be necessary nor useful when the body is in a horizontal position. The uterine ligaments are so situated as to maintain the uterus in its normal position when the body is in a horizontal position.

It is a question whether man's original sin was not, as a distinguished scientist said, "when he first got upon his hind legs to walk."

To us, who are accustomed to seeing humanity in the upright position, the change is a pleasant and agreeable one; but, like many other things consequent upon the evolution from the barbarous to the civilized life and habits of refined society, it has its attendant evils, and it is the province of the physician and surgeon to relieve the consequent ills as much as possible. After a time, in the process of evolution, there may be an additional ligament developed to suit the altered position of the body and

¹ Read before the North Central Illinois Medical Association.

retain the uterus in its normal position.

Dr. Pancoast, the celebrated Philadelphia anatomist, in dissecting the celebrated Indian chief who died in captivity at Washington (I cannot recall his name), found a muscle arising from the spinous processes of the vertebræ, and inserted into the right shoulder-blade, the office of which could only be to draw the shoulder-blade backward and in a fixed position, as in drawing the bow, and which has never been found in a white man. Until then, we will have to deal with the trouble under consideration as best we can. And now the inquiry is, What is the best and most successful treatment of the difficulty? Pessaries of various forms and substances have been devised, but, although some of them have been successful in keeping the uterus in nearly its normal position, yet the presence of the instrument itself is objectionable, as it presses upon parts which are not designed to bear such pressure, and causes nervous symptoms by reflex irritation, as well as by direct pressure. Thus neuralgias, constipation, and hæmorrhoids occur from the obstruction to the venous circulation, as well as the absence of veins in the vessels, as before stated.

The only rational treatment is hysterorrhaphy, or ventral fixation; and I take the stand that all cases of excessive retroversion should be subjected to this operation, which is perfectly successful and safe when done under strict asepsis. I have operated upon cases which had been invalids for years, until life had become a burden, and in a few weeks they were, as they expressed it, "Entirely new and different women altogether."

One of the cases recently operated on had been in a hospital in Chicago three years ago, where there was an operation done to break up adhesions which bound the uterus down, and the subsequent wearing of a pessary. She was, when I operated upon her, a confirmed invalid,—good for nothing. When I operated, I found the adhesions more extensive than before the first operation, a result of the consequent inflammation, and it was a difficult thing to break them up so as to bring the organ into position. The operation, however, was successful, and the result perfect. She is now relieved of neuralgia and the obstinate constipation previously existing. The last case I operated upon, last month, was entirely healed, and the patient was up in nine days, and went home to a distant town in seventeen days. Why temporize with unsatisfactory measures, when a perfectly safe operation effects a permanent cure?

In conclusion, allow me to say a few words as to the prevention of retroversion. Although we cannot entirely prevent its occurrence, especially in those who have to work hard for a livelihood, much can be done to guard against it. Girls should be taught from early childhood to habitually lie upon the side, or, rather, sides alternately, and not in the supine position. I mention sides alternately, for the reason that if one habitually lies upon the same side there is an arrest of symmetrical development of the face and head, and more or less of the body and limbs, by the constant pressure upon the same parts so many hours out of each twenty-four. Any one who observes closely can tell upon which side a person habitually

lies, if upon one side nearly exclusively. This is a fact which has an important bearing in many cases, and is of more importance to girls than boys, but applies to the latter also, for a symmetrical development of the

former is of more importance to them as a matter of beauty, as well as the position of the pelvic organs while in process of growth, and also ever afterwards.

Fæcal Fistula.

BY MORDECAI PRICE, M.D.,
PHILADELPHIA.

My attention has been called to this subject by those who are left to treat cases where abdominal section has been performed for aggravated pelvic disease. In looking over the field of abdominal surgery there is no accident or complication that so upsets the household and paralyzes the attendant as to find gas and fæces being discharged through the drainage-tube or the wound during treatment or convalescence.

Serious pelvic and abdominal diseases complicated by delays are unquestionably the cause of fæcal fistula. Leakage from an abscess cavity or any localized point of infection coming in contact with bowel causes localized peritonitis, fastening the bowel to the abscess cavity or tumor, necessitating at time of operation the detachment of bowel adhesions, wounding or injuring the bowel at times very extensively; as a usual thing these injuries can be repaired and the bowel left in a safe condition; but if the case be one of an old pus-tube or appendicitis abscess the cheesy and necrotic condition may have extended to the bowel wall itself, and

may take the most painstaking and heroic surgery for its repair; many inches of bowel having to be scraped and curetted so that the diseased portion of bowel can be brought together and sutured with safety, while in other cases a resection and union by the Murphy button, or some other equally good method, will be the only way out of the difficulty.

These small necrotic spots or sloughing portions of bowel wall are the direct cause of fæcal fistula in operations for the removal of pus, after such operations the bowel should always be carefully inspected, adhesions separated, and the necrotic spot carefully removed and the bowel carefully sutured.

In operations on the left side of the pelvis, the specimen buried under the sigmoid, the abscess involving the bowel almost to the anus, leaves a bowel wound that is almost impossible to repair, and it is in just this class of cases where we meet with the greatest number of fæcal fistulas on this side of the pelvis; and to repair them requires a very short needle passed by a hæmostatic forceps, and

carefully tied, and so on until the opening is perfectly closed; at times this will take great patience and operative skill. Then, again, fæcal fistula may occur from too much handling and bruising in separating the bowel from abscess wall or tumor. When such accident or condition of bowels exists, every effort should be made to restore them as near as possible to their natural condition, and then so place the injured portion of bowel in such position as will favor any leakage through the drainage-tract; the drainage-tube should also be so placed to protect the general peritoneum and favor the easy and free discharge of all leakage. Injections into the bowel should not be permitted under any circumstances, after operation, where the bowel has been injured or where there is the slightest danger of fæcal fistula. Neglected cases of extra-uterine pregnancy offer a most fertile field for fæcal fistula. This may occur in any portion of the small or large intestine, and should be most carefully guarded against in the surgical work in the removal of the capsule from the adherent and diseased bowel.

Appendicitis and abscess at the head of the colon supplies us with more than one-half of our fæcal fistulas. There has been a great deal said and written on the subject of abscess at the head of the colon or appendicitis, and as to how it is to be treated. In my opinion, there is but one way, and that is to do as little work as is requisite for the recovery of the patient, and no more.

An operation for an abscess at the head of the colon: it should be opened and washed out and drained with both rubber and gauze; and when the peri-

toneal cavity is not opened or the bowels obstructed, we should not meddle for the removal of the appendix or disturb the inflammatory barrier between the head of the colon and the general peritoneal cavity. These cases should all recover; I have had seventeen consecutive recoveries in the last two years, since I have followed this conservative plan, some with a large collection of pus and others with only an ounce or two. In five the general peritoneal cavity was opened, the inflammatory barrier not being sufficiently strong to stand an investigation of the abscess cavity with the finger without rupture.

In several of the cases operated on there were multiple openings in the head of the colon and also in the appendix, with the contents of the bowel pouring out at the time of the operation. I believe all these cases to have been primarily appendicitis, all were freely purged before operation, all were freely washed out, and where the general peritoneal cavity was opened, thorough irrigation of that cavity. A gauze drain was carried to both upper and lower angle of wound to the very bottom of abscess cavity and between the two gauze drains, a rubber drain also to the bottom of the abscess cavity was placed. The wound of operation was never over two inches in length, and required sutures in very few of the cases, and then one only at either end. The gauze and rubbershould be removed from thirty-six to forty hours after operation, and again renewed from day to day until recovery. In these seventeen cases more than half of them had fæcal fistula, many of them had discharge of fæces and gas at the time of operation. All recovered and fistula closed

within ten days after operation; all were left in bed four weeks to prevent hernia. In cases of injury of bowel where fæcal fistula is thought to be probable, the drainage-tube should be carefully watched, and if indications of bowel-leakage show themselves, the tube should be kept in place sufficiently long to guarantee a free passage to all discharges from the bowel so as to prevent the infection of the general peritoneal cavity.

The drainage-tube should then be removed and the abdominal wall and wound kept as clean as possible, no probing or syringing of the drainage-tract, no purgation, patient should be kept on milk diet strictly or as near as possible. Fæcal fistula from blows, wounds, or injuries of the abdominal cavity, not operated on at time of injury, may be so placed that it is impossible to get at them to close without direct surgical aid; this may require an anastomosis, extensive separation of bowel, or resection of a portion of bowel, and will tax the skill and courage of a trained abdominal surgeon.

The same difficulties and obstacles

are to be met with in fæcal fistula from badly treated strangulated hernia, or from a gangrenous condition of the bowel at the time of operation which could not be corrected at that time owing to the dangerous condition of the patient, the operator preferring an artificial anus or fæcal fistula to an immediate operation that he considered would be fatal. I would simply say in closing, that in the beginning of my abdominal work, a fæcal fistula was horrible, and I did not believe it would close, but after years of experience in desperate abdominal operations and many a rent and torn bowel and in many of them I expected fæcal fistula, and all but two of them recovered. Fæcal fistula to-day gives me no particular anxiety. In cases of fæcal fistula from tuberculosis of organs within the abdomen, we should be exceedingly careful how we wound or injure bowel, also to the use of drainage, for a tubercular bowel so wounded as to produce a fæcal fistula will tax the resources of the surgeon to accomplish its repair or cure, and in many cases it will remain to annoy a hopelessly ill patient to the end.

EDITORIAL.

The Limitations of Abdominal Surgery.

IN a valued communication published in this number of the *ANNALS*, Dr. Buckmaster calls attention to the tendency which exists at present towards claiming results for abdominal surgery which are rarely obtainable, and which do not fairly represent the present state of the art. He enforces his remarks with the publication of a fatal case in his own practice, thereby setting a laudable example

which we sincerely hope will be generally followed. We have no doubt that our *confrère* is entirely right in feeling that it is of the utmost importance for the profession and for the public that a just idea of the limitations, as well as of the glories, of abdominal surgery should be inculcated. Unfortunately, at present, the tendency is in the opposite direction. As long as human nature remains as

it is there will be a strong temptation to publish brilliant and successful cases, while saying nothing about others which have ended fatally. Wonderful and almost incredible series or "runs" of successful cases are paraded in the journals, and sent out in thousands of reprints to the wondering and possibly incredulous profession; but there is apt to be a depressing silence as to the results of the operation before and after the "run." Now, the natural consequence of this is that a large number of surgeons get the idea that abdominal operations are easy and not very dangerous, and they try to perform them without sufficient training or knowledge of the subject, so that the patient promptly dies, but the case is not reported.

It is, therefore, well to consider some of the conditions and accidents which may occur in spite of the most dexterous, careful, and conscientious surgery, and must always lead to a certain amount of mortality. First comes the finding of malignant disease of the abdominal organs, or growths, which in our experience is not rare, and cannot always be diagnosed with sufficient accuracy to contraindicate operation. Next comes a chronic pyæmic condition, where pelvic suppuration is not confined to the uterine appendages, or to the neighborhood of the appendix, but has burrowed about and formed pockets and sinuses, with or without the presence of tuberculosis. Then allowance must be made for the presence of fatty or amyloid degeneration of important organs, for the weakness caused by hæmorrhages, pain, want of nutrition, old age, etc., for the presence of acute peritonitis, or of irremediable disease, or trauma of the intestine, or of dense and intractable

adhesions, and, finally, for the natural proneness of some individuals to sepsis, hæmorrhage, or paralysis of the intestines after operation.

All of these are conditions which no one can, avoid who does his duty in operating on all cases which seem to offer any reasonable chance of cure, and the standing wonder of the profession is as to how a very few men seem to be so much more fortunate than all others in meeting such serious complications so seldom.

Taking all these facts into consideration, we are inclined to agree with Dr. Buckmaster, in his statement, that an average of 10 per cent. of mortality in abdominal operations of all classes as met with in a mixed hospital and private practice is a fair and moderate one, which does credit to any surgeon. Some few men by special skill may reduce the percentage of mortality considerably, particularly when their practice lies in certain lines of gynæcic surgery, giving a large proportion of comparatively safe operations, especially when much experience has improved the natural ability of the operator.

We have no doubt, however, that, taken as a whole, the percentage of deaths in abdominal operations in this country to-day is vastly higher than 10 per cent., and it would be something dreadful to contemplate were it not that a large number of operators, conscious of their limitations and tender of their "records," decline to operate on a great many cases which really require surgical relief, and thus cause the unhappy patient, after long suffering, when in a wellnigh desperate condition, to finally apply to those surgeons who are able and willing to handle such cases. This process of natural selection, improv-

ing the records of the many and injuring those of the few, averages the mortality of all such operations in the hands of different surgeons between 10 and 30 per cent. A few men after they have established a reputation, and have "cleaned up" the bad and neglected cases in their part of the country so that they get cases in good condition from the family physicians of their vicinity,

are able to reduce the total mortality considerably below 10 per cent.; but certainly for medico-legal purposes the standard should not be set as high as 90 per cent. of recoveries, and many estimable gentlemen who are essaying abdominal surgery with little preparation and less experience will find that 50 per cent. of mortality will hardly cover the results of their pernicious activity.

SOCIETY PROCEEDINGS.

New York State Medical Society.

Meeting February 8, 1894.

ABSTRACTS.

THE INCH-AND-A-HALF INCISION AND WEEK-AND-A-HALF CONFINEMENT IN APPENDICITIS.

DR. ROBERT T. MORRIS, in a paper written under this title, stated that we had recently learned four principal things relative to appendicitis, and he was now asking the members of the profession to accept a fifth point,—

(1) We had learned that appendicitis was of such common occurrence that every general practitioner had many cases as his *clientèle*.

(2) It was now generally known that multitudinous forms of abdominal inflammation were symptomatic of appendicitis.

(3) Statistics showed that late operation did not give us much encouragement.

(4) It was known that early operation or operation in the interval between attacks was an operation with trifling mortality (with none at all in his experience), but that there was danger of ventral hernia resulting

from the operation if a long incision were made.

The fifth point was this: We do not need to make a long incision in appendicitis; cases that are operated upon at the outset of the inflammation, or in the interval between attacks, recover, as a rule; and there will be no hernias and no permanent scars if the surgeon will accept as a standard the author's abdominal incision, which is one inch and a half in length, the divided structures of the abdominal wall being united separately with fine catgut afterwards. The author buries the stump of the appendix with Lembert sutures. His abdominal scar disappears entirely, so that at the end of a few months it cannot be seen. His death-rate has been nothing at all in cases without pus, and physicians upon whom he depended for cases were now ashamed to have him find pus in the cases to which they called him. He did not know just where to look for danger in any of the cases

operated upon at the time of his choice, but called the attention of the members of the Society to one danger in the use of carbonate of sodium for reversing peristalsis of the bowel. A note was at present going the rounds of the press to the effect that carbonate of sodium was useful in reversing peristalsis; but the author in experimenting with rabbits accidentally discovered that carbonate of sodium on touching the ileum regularly produced intussusception in less than forty-five seconds. The mechanism of the intussusception consisted in spasm of a belt of circular muscular fibres of the ileum, and this portion was then quickly invaginated by the peristaltic action of the longitudinal muscular fibres. The author now uses chloride of sodium for reversing peristalsis in all of his operations.

He stated that there was strong opposition to the plan of removing an infected appendix just as soon as it was discovered; but this opposition must fade away as soon as physicians generally could benefit from his experience, which was to the effect that appendicitis was an infectious exudative inflammation, which did not disappear on disappearance of the symptoms. He had removed a large number of appendices from patients who felt perfectly well, but who could not obtain life insurance or who feared recurrence, having had a previous attack of appendicitis. In all of these cases he found destructive processes in progress. Sometimes there was slowly-progressing necrosis of the lymphoid tissue of the appendix; sometimes he had found tuberculosis or carcinoma insidiously beginning at the seat of the old inflammation; sometimes adventitious bands set snares for bowel; and he had dis-

covered that proliferating endarteritis, which must eventually lead to gangrene of the appendix, was common in very mild chronic cases. He had found proliferating endarteritis producing slow occlusion of the arteries of the appendix in three mild chronic cases in succession.

The author stated that surgeons were laughed at occasionally because they found normal appendices at operation for supposed appendicitis, but he did not believe that proper examination was made of the specimens. He had removed two or three appendices which were apparently perfectly normal, but the patient's symptoms all stopped after the operation, and when cultures of bacteria and microscopic sections had been made from these specimens it was found that they had been dangerously infected. The mucosa and adenoid tissue were undergoing destruction by the colon bacillus.

The author stated that when his inch-and-a-half abdominal incision was employed in removal of infected appendices, patients left the hospital at the end of a week and a half. If an incision two inches long were made, the patient would not be ready to leave until fourteen days after the operation; and if the incision were from two and a half to four inches long, eighteen days would be required for repair. Consequently he had adopted as a standard the inch-and-a-half incision and week-and-a-half confinement plan, which left no hernia and an evanescent scar.

By operating immediately in acute cases, he did not mean on the following day, but on the following hour.

Physicians who do not accept this plan must lose a few cases that they do not expect to lose, and they must

let very many patients suffer tediously and unnecessarily; but there will not be much further opposition, because physicians are only too glad to do the very best thing as soon as they have learned what it is.

The insurance companies would not insure a patient who had ever had appendicitis, and whose appendix still remained, if they were to note the character of the adventitious peritoneal bands which form in these cases, and if they observed the persistence of appendicitis and of supplementary diseases in the appendices of patients who were thought to be quite well.

DISPUTED POINTS IN THE SURGERY AND PATHOLOGY OF PELVIC DISEASE.

Dr. Joseph Price, of Philadelphia, read a paper with the above title, which provoked considerable discussion and opposition, inasmuch as the author in a forcible and characteristic manner attacked the knowledge, judgment, and motive, both of those who reject operation for pelvic disease and of those who rush into abdominal surgery without sufficient experience or thorough training. The following sentences show what the writer thinks, and does not hesitate to say "Professor Palaver Papaver, the great Oriental authority, astonishes the world by radically curing incurable cases by waiting till they are past operation and letting them die themselves. By this method two objects are accomplished,—the diagnosis of ultimate death is confirmed, and Nature has her way. Nature, to many minds, is the sovereign remedy to be trusted in cases of doubt; by so doing credit is got gratis in the event of recovery, and blame is escaped by

philosophic resignation to mysterious methods of 'Nature.' This is in effect the advocacy of the everlasting rest treatment. The advantages of this peculiar method are so patent as to need no exposition. Professor Dubioso Dogmaticus classifies his treatment according to the temporal conditions of his patient; surgery, where pay is doubtful; delay (rest) where collections are certain; surgery to the poor who must work; rest to the rich who can pay. This is logical. The benefits are equally distributed. On the one side the patient receives them, on the other the doctor. Professionally we must not be selfish. As to facts, there are enough at the odds to give an argument for everything we desire to try. This is an argument furnished gratis for my controverters. Professor Ingenuus Subrisus (lately appointed) treats every case two ways, each case a different way, and is doubtful every time. This is a combination of the homœopathico-allopathico miscegenation, allied to the propagation of certain defamed and unfortunate creatures to whom ancestry is a reproach, pedigree impossibility.

"Professor Audax Gabulandi represents the radical school of rising surgery, which has for its aim the universe, object to make extremes meet.

"Motto: Either do not operate at all, or, if operation is necessary, or better, decided upon, remove everything. This radical advice is a necessary accompaniment of any uncertainty as to where the exact seat of the disease is located. But if all is removed, within limits, we are sure of attacking and evacuating the offending part with corresponding success; or in case of failure, there will be so much

less to seek at the next interview on the operating table."

The writer also paid his respects to the medical press, saying that the evil of our profession is the too prevalent medical journal. These are too often established to give a ready advertising medium to the patent nostrum or the enterprising manufacturer, and must be filled at any cost, at any risk, with anything that takes up space. After this introduction the author took up the subject of pelvic cellulitis, complaining that, in the face of the accurate knowledge which we now have on this subject and which we really have had since the time of Bernutz and Goupil, there are yet men who will treat pyosalpinx with poultices and painting of iodine, with a ghastly uniformity in the results. Yet in the face of all this, and of all the evidences lately accrued, we have it gravely stated by men who ought to know better that pus in the pelvis or in the tubes is rarely dangerous *per se*. He went on to show how useless functionally diseased tubes are and how dangerous they may be if left in the body. He condemned aspiration and all methods of opening through the vagina, giving his reasons in full for this opinion.

Dr. D. P. Allen, of Cleveland, presented by invitation a paper entitled "Cysts of the Epigastrium." He reported two cases which bore clinical evidence of this malady, and upon which he had operated. The conditions found at operation were such as to rouse in his mind the suspicion that the cases were not true cysts of the pancreas, but that one was a collection of fluid in the bursa omentalis, and that the second was the result of

a hæmorrhage behind the posterior wall of this bursa, pushing it forward into the epigastrium.

He reported repeated injections of the bursa omentalis made through the foramen of Winslow; the material thus injected anteriorly separating the stomach from the transverse colon, and also the two layers of the greater omentum. The fluid injected corresponded in location to that which had been called cyst of the pancreas.

He held that injuries to the organs surrounding the bursa, as, for instance, the pancreas or lobus spigelii of the liver, may result in the pouring of blood or glandular secretions into this bursa, and this by retention produce a cyst. This becomes possible from the fact that sometimes the foramen of Winslow is closed.

Though a hæmorrhage or a primary collection of fluid may be absorbed by the stomata of the diaphragm, in the case of repeated collections of such fluid the power of absorption might be lost.

As a demonstration of the fact that the diaphragm has great power of absorbing fluids, he presented the diaphragm of a rabbit into whose abdomen one-third of the bulk of the rabbit's blood had been injected. This had been taken up by the diaphragm within two hours, the other parts of the abdominal cavity not showing similar power of absorption.

While there are doubtless cysts of the pancreas, as has been demonstrated by operation, the writer holds it to be probable that many cases which had come suddenly, and had succeeded shortly upon traumatism, were the result of collections of fluid in the bursa omentalis.

Massachusetts Medical Society, Section for Obstetrics and
Diseases of Women, Suffolk District, Boston.

DR. GEORGE H. WASHBURN, SECRETARY.

Meeting of December 28, 1893.

DR. F. W. JOHNSON read a paper on "Six Cases of Extrauterine Pregnancy. One a Pregnancy in Both Tubes at the Same Time, on One Side a Twin Pregnancy Probably. Cœliotomy. Recovery in All."

CASE I.—Seen first September 29, 1891. G. F., married, aged 28; for past year severe pain in right ovarian region when unwell; leucorrhœa for years; always regular till August 9; menstruation did not come on then as due. August 16, flowing began and continued two weeks, at times profusely; in two weeks began again and continued till present time. From August 16 to September 20 dull pain in right ovarian region; breasts have begun to enlarge. September 20, sudden severe pain in right ovarian region, lasting an hour and producing fainting; more severe attack on September 28.

Examination showed sensitiveness over whole of lower abdomen, and by vagina a soft sensitive mass in Douglas's pouch. Uterus three inches deep. Temperature 99° F.; pulse 110.

Operation.—On opening abdomen dark fluid blood welled up through incision; dark clots also in cavity of abdomen; no bright blood till left tube was brought up to view. A swelling, size of English walnut, in outer end of right tube, with a rupture, size of pin's head, through which bright

blood was oozing. The right tube and ovary were ligated and removed; a cystoma of the left ovary was also removed with the tube. The peritoneal cavity was thoroughly washed out with a salt solution, and the abdomen closed. Uninterrupted convalescence.

Pathological Report.—About two centimetres from the fimbriated end of tube, which was normal, was a swelling containing blood-clot and immature placental tissue. No foetus found.

CASE II.—B. K., married, aged 28; three children; no abortions; seen September 30, 1892. First child October 1, 1889, last one March 1, 1892. Nursed child up to time of entering hospital.

Bloody discharge for four weeks, with bearing-down pains in lower back and abdomen and left side, with sharp pains in left ovarian region. Urination and defecation caused pain in left ovarian region. Large movable tumor felt on the left in region of broad ligament.

Operation.—October 10. Large grayish-white cyst found; eleven and a half pounds of dark blood fluid removed by tapping; about eight or ten ounces of blood and *débris* between layers of left broad ligament. This was emptied and as much of broad ligament as possible tied off; washed out with salt solution and packed with sterilized gauze to stop bleeding;

right tube and ovary healthy and were left; much shock; gauze removed in forty-eight hours; sinus left, otherwise convalescence was perfect.

Microscopical examination revealed some decidual cells.

CASE III.—H. J. O., married, aged 38; three children; one abortion with twins at five months, eight years ago. Two living children since; last one November 12, 1891. Operation October 17, 1892. Got up slowly from last confinement. Menstruation returned March 6, 1892, lasting eight days; no pain. Unwell every five weeks till October. When four days over the time, October 10, taken with severe pain in lower abdomen, fell to floor and was unconscious for several minutes. Large doses of morphine required to relieve pain. Face pale; faint; very thirsty. October 12, severe pain in both ovarian regions and began to flow; this lasted only about five minutes. October 16, the pain in lower abdomen returned; very pale, faint, and thirsty; pain lasted an hour. October 17, more violent attack; collapse; temperature 99° F.; pulse 120. Reaction set in after a few hours. She was then removed to St. Elizabeth's Hospital, and the operation done at once. Clots and fluid blood quickly sponged out; the left tube and ovary removed; no drainage. From the rupture of the tube was squeezed out an unbroken sac filled with clear fluid and containing the embryo. Severe shock after the operation. Discharged well in twenty days.

CASE IV.—November 30, 1892. S. F., aged 29, married; seven children; youngest 6 years old. Nine years ago two miscarriages at six months; ten years ago one at eight

months. From first pregnancy until six years ago never menstruated, as she was either pregnant or nursing her children; since then every thirty days; constant leucorrhœa. Last unwell four months ago; the first two months no trouble, except morning sickness; then loss of appetite, epigastric pain, and constipation. Six weeks ago attacks of sharp pain in left ovarian region began. At this time also bloody discharge from vagina; abdomen distended and sensitive below the umbilicus; pulse and temperature elevated. By vagina a soft, elastic mass, size of a small orange, felt in right ovarian region.

On opening abdomen a large quantity of dark fluid and clotted blood found. The head of an embryo was found protruding from a rent in the right tube. When drawn out and placed on the table it moved. Measured seven and a half centimetres. Both tubes and ovaries removed. Peritoneal cavity thoroughly washed out with salt solution. No drainage. Good recovery.

CASE V.—Seen first January 24, 1893; operation January 29. W. W. R., aged 24, married; never pregnant. Never any dysmenorrhœa. Last regular menstruation began September 11; but quantity less than usual. Seven weeks after this sudden severe pain in lower abdomen and vomiting, lasted an hour. These returned in two weeks, and lasted two hours. Nausea and vomiting continued between these attacks. A third attack ten days later. When three months over time ptyalism began, and lasted six weeks. A fourth attack twelve days after the last; and seven days later a fifth, which was accompanied by a show. November 26, pain with

flowing. December 3, began to flow quite freely; went to bed and flowed a week. December 10, severe pain and profuse flowing, followed by collapse. Four weeks later, with no flowing, passed a "cast of the womb." In bed till January 10. Sore feeling in left ovarian region.

Six years previous to this was in bed six weeks with peritonitis, and has had several less severe attacks since.

A smooth, elastic tumor felt behind and to the right of uterus. Uterus firmly fixed.

No blood in the abdominal cavity. Between the layers of the right broad ligament there was a tumor, size of an orange. Could not be gotten out intact. Fœtus, placental tissue, and blood were removed. The cavity in the broad ligament thoroughly cleaned and washed out, then packed with gauze. Tube and ovary removed on the right side. A cystoma of left ovary found and removed. Returned home in three weeks. Menstruation returned two months after the operation and has been regular every four weeks.

CASE VI.—This is the only case on record, as far as could be found, of pregnancy in both tubes at the same time.

Mrs. H., aged 36, entered hospital November 16, 1893. No children. Has aborted three times, at about two months, at intervals of about a year; last one two years ago. Menstrual history normal.

October 25, having gone six weeks without menstruating, passed a small clot. "Labor pains" present to a slight degree. October 27, had severe attack of colicky pain, obliging her to go to bed. Pain severest in right

ovarian region, and thence extended up under the ribs. This was relieved by applications of heat. Slight flowing. The next day up and about. October 29, the severe pain returned; had to stay in bed till November 1, in constant pain. On getting up, November 1, seized with severe pain in lower abdomen and fainted. Now began to flow quite freely. Had a "pressing down" feeling in the rectum. In bed rest of time till November 16, when operated on. Uterus enlarged, four inches in depth, a smooth, elastic mass in the left ovarian region, and a soft, boggy mass in the right.

Operation.—Uterus thoroughly curetted. A half pint of dark fluid blood found in peritoneal cavity. On the right side a ruptured tubal pregnancy was found. On the left side an unruptured one at the fimbriated end. Both tubes and ovaries removed. Abdominal cavity washed out. No drainage. Good recovery.

Pathologist's Report.— "Further study of this remarkable specimen is necessary. But as far as the investigation has gone it shows with certainty the fact of a pregnancy in each tube, with the possibility of there also being a twin pregnancy in one tube. It is probable that the age of the pregnancy in the two tubes is not the same."

DISCUSSION.

DR. W. F. WHITNEY: Dr. Johnson has kindly placed at my disposal for microscopical examination these very interesting cases. With one possible exception, the last case of Dr. Johnson's is probably unique.

DR. E. W. CUSHING: We are grateful to Dr. Johnson for his interesting paper. There do not seem to be as

many cases reported here as in Philadelphia. Probably there are as many in proportion to the population, and it must be that the general practitioner is not on the look-out for them. I trust this paper will do its share of work in instigating more careful diagnosis.

In 1887 my attention was specially called to this subject, and since then I have seen and published a number of cases. The first ones, with photographs of specimens in the Museum at Harvard, were published in the *Annals of Gynecology*, February, 1888.

I have operated on three cases. One (ANNALS OF GYNÆCOLOGY AND PÆDIATRY, January, 1891) was at nine months. The placenta there lay in the end of the tube. In the second case the blood was encapsulated at one side. In the third case the diagnosis was made and the tube removed before rupture.

It is an interesting question as to how many cases occur where the rupture takes place between the layers of the broad ligament. Dr. Johnson reports in one case that it was in the layers of the broad ligament. Dr. Whitney also refers to the same case. Tait's theory is that where the patient does not die from the rupture, it is in the layers of the broad ligament. Price, who has had ninety cases, says he has never seen the rupture and hæmorrhage between the layers of the broad ligament. Certainly in the majority of cases it is behind the broad ligament, and may be roofed off from the rest of the peritoneal cavity by adhesions.

DR. L. V. INGRAHAM: A case came under my observation which I should like to report. A woman, aged 32, single, came to me one day complain-

ing of severe pain in the lower abdomen. Had been flowing profusely for a week. Always regular in menstruation up to six weeks before this, when she went over a week, then began to flow about an hour every day. This continued three weeks, then did not flow again till present flow began. Examination showed uterus enlarged, a good-sized mass on the left. Lower abdomen very sensitive to pressure. Sent her home to bed. Saw her at seven o'clock next morning. On the way to water-closet the night before she fainted. Does not know how long she lay on floor. Chilly when came to and crawled back to bed. When I saw her, temperature 97° F.; pulse 150. Removed to the hospital, where Dr. Elliot operated on her. Abdomen was found full of blood.

DR. J. W. ELLIOT: The case Dr. Ingraham reports was an interesting one. The ruptured tube was removed, abdomen washed out, drainage used. Good recovery.

Dr. Johnson made the diagnosis in four out of the six cases beforehand. A few years ago, very few diagnoses were made before operation. During the past year I have operated on three cases. Diagnosis made beforehand in two.

Prognosis also is more favorable than it used to be. Dr. Johnson's cases all recovered. My cases all recovered.

Pain with collapse and tenderness, even if one cannot feel anything in the vagina, would be sufficient reason for opening the abdomen, if there had been the slightest irregularity of menstruation.

DR. W. L. BURRAGE: I have operated on five cases, all since October,

1892. All recovered. Diagnosis made in three of these cases, and thought of in the fourth. Hæmorrhage in all these was behind the broad ligament, and encapsulated in some. Generally, this condition is likely to be confounded with pus-tubes, but the operation is for the most part indicated in either event.

The case in which extrauterine pregnancy was not suspected was 30 years old; mother of four children; catamenia always regular, lasting three days; four or five napkins. Backache constantly; worse at catamenia. Entered hospital August 15. In July flowed three weeks, passing many clots, and had sharp pains in left lower abdomen, lasting half an hour to an hour. Ever since that time had pains once or twice a week, but feel-

ing of prolapse was what troubled her most. Examination showed mass in left pelvis size of fist; abdomen sore; bearing-down feelings; bad tear in cervix and perineum. Operation showed extrauterine pregnancy of about six weeks. Good recovery.

DR. W. M. CONANT: Have seen seven cases in the past year. Diagnosis made in four. The first case was sent to me as a simple cyst of ovary. I also so diagnosticated it, opened abdomen and found the cyst; but on the other side was a tubal pregnancy. Removed both. Good recovery.

All the cases except one recovered. There was hæmorrhage into the tube and pus in that fatal case. At the end of a week after operation developed septic peritonitis and died.

ABSTRACTS FROM CURRENT LITERATURE.

BY CHARLES G. CUMSTON, M.D.,

BOSTON, MASS.

Pseudo-membranous Enteritis and its Rôle in Gynæcology.

DR. MONVEL (*Nouv. Arch. d'obstet. et de Gynéc.*, September, 1893), of Bordeaux, after making a number of remarks, and relating six cases, the author of this excellent paper draws the following conclusions:

(1) Pseudo-membranous enteritis is quite frequently met with in diseases of the uterus or the adnexa.

(2) Its seat is in the colon, and forms a variety of chronic colitis.

(3) The patients who have this complication are subject to habitual constipation and are confirmed neuro-pathes.

(4) The affection can coincide with a disease described as *pseudo-membranous dysmenorrhæa*.

(5) In certain cases it appears to be produced by a compression exercised on the intestine by a retroflexed uterus.

(6) In other cases it seems just to admit a propagation of a periuterine or uterine inflammation.

(7) Whatever may be the pathology of the disease, the possibility of its existence should not be forgotten when the cause of persisting abdominal pains is to be determined in a

patient affected with metritis, perimetritis, or deviation of the uterus. By a careful examination of the symptoms, one is led to admit that, in

a certain number of women, the pains which *a priori* seemed natural to come from the uterus or adnexa are really in the intestine.

Cæsarean Operation.

At a meeting of the Surgical Society of Paris, in February, 1893, Dr. PICQUÉ related the case of a woman, aged 37, who consulted him in June, 1892, for an eight and a half months' pregnancy, and who had a myoma of very great size.

The abdomen was developed in the transverse direction; the head of the fœtus was in the left iliac fossa, the back to the front and the small parts to the right. By palpation, a myoma was discovered on the right side of the uterus, but a vaginal examination revealed a tumor which filled up the entire excavation and firmly united to the uterus. A natural labor was deemed impossible by Drs. Tarnier

and De Ribes. The operation was performed on the probable date of labor, for during the previous night symptoms of approaching delivery were noted. Median laparotomy was done, the uterus was left in place, and incised in the median line. The placenta was peeled off, and a living child was quickly extracted. The uterus was flushed with hot boiled water, and carefully united by deep and superficial sutures. The abdominal wall was sutured, and the case ended without any complication. The author made the remark that the fibrous tumor which occupied the interior segment of the uterus had filled up the entire abdomen.

Phlegmon of the Broad Ligament.

At the meeting of the Anatomical Society of Paris, on October 20, 1893, Drs. Raffray and Jayle (*Nouv. Arch. d'obstet. et de Gynécol.*, November, 1893) showed the internal genital organs of a woman who had come into Dr. Monvel's service at the St. Antoine Hospital, complaining of pains in the abdomen. Physical symptoms were those of a purulent collection in the true pelvis, and as fluctuation was also felt just above the pubis, an incision was made in the abdominal wall. The patient ap-

peared better on the evening of the operation, but she was taken later with a puriform diarrhœa, seeming to indicate that there was a communication between the abscess and the rectum, and the patient died from sepsis. The autopsy showed that the abscess was periuterine, and emptied into the sigmoid flexure. The right tube, which was healthy, was, so to speak, enclosed in the abscess. The uterus was enlarged, indicating a recent accouchement; the zone of the placenta in the uterus was connected

with the abscess, leading the authors to suppose that this was the origin of the trouble. Much pus was found around the uterus and colon, in spite of the intestinal and abdominal openings. This was the third case that

the authors had met with where abdominal incision was not sufficient, and they advised making an incision in the vagina at the same time, thus allowing free drainage.

BOOK REVIEWS.

TRAITÉ DES MALADIES DE LA GROSSESSE ET DES SUITES DE COUCHES.
Par le Dr. VINAY. Paris, 1894.

This excellent work, by one of the leading authorities of the Lyon's school, is the most important one that we have seen on the subject. In its 850 pages we find treated all diseases, both medical and surgical, that may befall a woman during pregnancy. All the different systems of the body are reviewed,—viz., digestive, respiratory, circulatory, urinary, cutaneous, and nervous,—the book terminating with a long and thorough study on infectious diseases, before and after delivery. The author, unlike many, treats the therapeutics of each case in a most careful way, and many interesting tables of statistics are thrown in, which render the prognosis and indications for operating most clear to the reader.

The work is above all clinical, and enables the physician to treat difficult cases which occur in his practice with much benefit. On the whole, the work is very complete, and the chapters on retroversion of the uterus, fibroid tumors, and diseases of the ovaries are remarkable, as is the one

dealing with albuminuria of pregnancy and eclampsia.

We congratulate Dr. Vinay on his work and recommend it warmly to the profession.

C. G. C.

TRAITÉ PRATIQUE DE GYNÉCOLOGIE.
Par MM. les Drs. BONNET et PETIT.
Paris, 1894. Chez J. B. Baillière et fils, 19 rue Hautefeuille.

This manual, full of excellent original figures, unusually well done, of which many are in colors, is another attestation of the good work actually done in France in gynæcology. The authors treat fully the pathology, symptoms, ætiology, and treatment of diseases of women. The technique is especially well written upon, and a clear idea of an operation may be obtained from the figures and text. The chapters on vaginal fistula, inflammatory lesions of the ovaries and uterus are exhaustive and well done. The chapters on diseases of and operations on the vagina are exceptionally good, as well as the one on laparotomies, both abdominal and vaginal.

C. G. C.

MANUEL DES MALADIES DE L'ENFANCE. Par D'ESPINE et PICOT. 5ème édition. Paris, 1894.

This standard treatise on the diseases of children has arrived at its fifth edition. Coming from two such pens as the author's, it is needless to say that a criticism is difficult. Suffice it to say that the chapters on spasmodic infantile tabes, typhlitis, perityphlitis, and cirrhosis of the liver have been entirely re-written and are brought up to date, and are well worth the attention of the readers of French literature. Articles on anæmia, pseudo-leucæmia, and leucæmia, and adenoid tumors of the pharynx, which have been added, make the work a most complete treatise on its subject.

We recommend it to all who may be interested in diseases of children as a conscientious and instructive book, and from which one may gain much useful and scientific knowledge.

C. G. C.

MEDICAL AND SURGICAL REGISTER OF THE UNITED STATES.

A WORK which rapidly passes to its third edition needs no further proof of having achieved a success. In the present case the claims are plain to

public favor. There is no work on the subject that contains such valuable information as does the Medical and Surgical Register. It contains the names of over 105,000 physicians practising medicine in the United States, whose names are arranged alphabetically by State or by post-office; after each name is given the name of place of graduation and the time. In large cities, with the addresses, even the street and number are given. In addition to this complete directory, the 105,000 names are repeated without addresses arranged alphabetically, accompanied only by figures, whereby the reader can readily find each name in its appropriate place in the directory proper. This list will prove of great convenience, as it will enable any one to find the present location and address of any physician in the United States whose name he knows. Preceding the directory of names are departments prepared with great care, full lists of all medical colleges, either existing or extinct, in the United States or Canada, of officers of the medical departments of the United States army, navy, marine-hospital service, and pension department, and a complete directory of the medical journals of the United States.

Note.

THE American Gynæcological Society will hold its nineteenth annual meeting at Washington on May 29th to 31st. A very interesting and instructive series of papers and discussions has been arranged; the proceedings will be duly reported in this

journal. The meeting at the same time and place of the various national special societies comprising the Congress of American Physicians will make the occasion memorable in various ways.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of April 5, 1894.

PRESIDENT DR. BARTON COOKE HIRST IN THE CHAIR.

INJURIES TO THE PELVIC FLOOR AND
THEIR IMMEDIATE REPAIR. BY
GEORGE M. BOYD, M.D. (See page
458.)

DISCUSSION.

DR. A. B. HIRSH :

I wish to call attention, in connection with the repair of recent injuries, to the use of A. Martin's method of continuous suture. If the tear is an irregular one, and if it is a deep one, then by all means this method comes into play. It avoids the formation of pockets, and compels accurate apposition. I have myself had occasion to apply it on only one or two occasions, but I speak on the authority of Dr. Martin. He claims positively good results in every case, and such I invariably witnessed at his private hospital in Berlin. Martin's method, as is well known, consists in the application of a series of continuous sutures in tiers, according to the depth of the tear.

DR. DANIEL LONGAKER :

I was struck with one objection raised to the use of silkworm-gut, that it interfered with catheterization. Personally, I find catheterization rarely necessary, and, if so, am rather inclined to look upon it as a symptom of septic infection. During the last year I think that I have not used the catheter in one puerperal case, and a number of major operations are included.

DR. T. RIDGWAY BARKER :

It has been my practice to employ the antepartum douche, and I have yet to find a single case where there was not sufficient vaginal mucus to facilitate labor.

With reference to the perineum, I agree

that where the vulvar orifice is too small to permit the passage of the head something must give way, and the perineum being the weakest point, rupture occurs there. I believe that the method of protecting the perineum that he suggests—that is, bringing down the rectum—is a good one, and perhaps the best.

With reference to ergot, I think that it has no place during any stage of labor, although it fills a useful place after the completion of the third stage. The objection to its administration before this period was forcibly brought to my notice in a case where I was called to help deliver the placenta. I found an hour-glass contraction of the uterus, through which it was almost impossible to pass the hand to reach the after-birth. This was undoubtedly due to the giving of a teaspoonful of the fluid extract of ergot, which was ordered the woman with the idea of assisting in the expulsion of the placenta.

With reference to anæsthetics, I consider them of great advantage in saving strength and relieving pain. I think that the patient, however, should be allowed to decide for herself whether or not she will have them.

As regards suture material, I decidedly prefer black silk. Its advantages are the ease with which it is tied, the firmness of the knot, and the readiness with which it is seen and removed.

DR. J. M. BALDY :

I am in accord with what Dr. Boyd has said, not only in the point of view of the injury done to the pelvis by laceration of the pelvic floor, but for the further important one, which is not always dwelt upon,—that is, the chance of sepsis where there is an open wound in the genital tract. I cannot, however, understand his objections to silkworm-gut. The only vital point is the ease of sterilization. While

silk is more easily sterilized than catgut, the silkworm-gut is even more readily sterilized. The other points are only of secondary importance. I cannot understand how the sutures will interfere with catheterization. As a matter of fact, catheterization should be rarely carried out after operative procedures.

With regard to the ends of the suture sticking the patient, I use silkworm-gut in plastic surgery, and have always been in the habit of shooting the ends and cutting the gut off close. There are then no ends to project, and the shot are easily found and removed. It is not so easy to pick up a silk knot as it is to talk about it. The important point is the ease with which the suture material can be prepared. And silkworm-gut can be more readily prepared than any other suture material, with the possible exception of silver wire

DR. CHARLES P. NOBLE :

I rise more particularly to say a word in regard to the suture material. I think that silkworm-gut is a nuisance in the perineum, and shot are more of a nuisance. I recently had a case come to my office where quite a formidable operation was required to remove two sutures which had been introduced by an advocate of silkworm-gut. It is said that it is easy to find these shot. In this case the gentleman himself took out the sutures, and yet he overlooked two of them, and made an invalid of the woman for nearly a year. The shot were buried in the mucous membrane, so that an incision was required to reach them. Some years ago I used shot myself, and I can speak from experience when I say that it leaves an ulcer, which has to heal by granulation. I have not used shot for a long while, and am satisfied that I can get along without them. I agree with the author of the paper, that silk is an entirely satisfactory suture material in the perineum. It is easy to put in, it is easy to tie, and easy to take out. I therefore think that it is the best of suture materials for the perineum.

DR. J. M. FISHER :

I wish to endorse what has been said with reference to shot being buried in the tissues. In the past three months I have had three patients come to the clinic of the Jefferson Hospital, who had been operated on by one of our most experienced operators. These

patients had silkworm-gut sutures with shot left in which had to be removed.

DR. A. B. HIRSH :

There is no question that if very fine silk be used, it will be absorbed in the tissues of the perineum just as readily as in intra-abdominal work. I have the authority of Saenger for the use of fine silk in perineal work to the exclusion of catgut and silkworm-gut, and he obtains ideal results. He insists that the finest silk will be absorbed, and his large experience warrants us in respecting such an opinion.

DR. M. PRICE :

With regard to the suture material. In the first place, silk does not answer the purpose of a suture after the third or fourth day. It is a material that will absorb all the dirt and filth and carry it along. It will cause abscesses in the perineum, and probably, as Dr. Boyd has said, 10 per cent. are failures from abscess from silk infected after introduction. Silkworm-gut is absolutely non-irritating, and almost as soft as silk, if it is properly prepared. It splints the tissues, and will keep them in position any length of time. Those who have used silkworm-gut and shot in such a manner that a surgical operation is required for its removal do not know how to use it. I have never seen a failure in a primary or secondary operation that was operated on by myself. I defy any man to produce a case that I have operated on that was a failure if I saw the case at the time of labor. The greater number of accidents occur in those cases where delivery takes place before the arrival of the physician. I have one case in which a tear extended an inch and a half up the bowel, where a young woman was attended by her mother. If you keep your fingers off the perineum, and when the head has reached the perineum urge the patient to breathe quickly and rapidly, I think that the head will pass without injury to the perineum if it is possible for it to do so at all.

When these gentlemen come and say that they have all these cases, coming from the hands of reputable surgeons where shot have been buried so deeply as to require a surgical operation for its removal, I must say that I doubt it.

DR. J. M. BALDY:

I wish to speak of a few inaccuracies that have arisen. If any one ties the suture too tight, it will cut. If the shot sinks, it is because the suture is too tight. It is not the fault of the material or of the shot, but of the operator. I do not say that this has not happened to me, but if I make this mistake with silkworm-gut, I should make it all the more with silk. As Dr. Price has said, silk will carry sepsis by capillary attraction into the deeper tissues. The failure in 10 per cent. of the cases reflects very seriously on the hospital antiseptics or on the suture material. I have never in my experience seen a case, whether with the primary or secondary operation, where union was not secured. Silk will cut as well as silkworm-gut if it is tied too tight; it is hard to render aseptic, and it is liable to carry sepsis into the deeper parts and cause abscess.

DR. J. M. FISHER:

I recall another case in which quite an extensive operation was required to remove a shotted suture. The suture had been introduced by one whom you would all admit was a gentleman of large experience in this line of work.

DR. GEORGE M. BOYD:

I stated in the paper that there had been 117 cases of injury, and that 107 of these had been repaired with a good result, and that then showed an imperfect result,—I did not say 10 per cent. of failures.

It seems to me that there should not be a great difference between Chinese silk and silkworm-gut. They are practically the same material, and if the Chinese silk is sterilized, and the parts kept clean, there is no reason why it should not be as good a suture as silkworm-gut. The reason I gave up the use of silkworm-gut was that I always tied the suture, and the patient complained of the ends sticking. It is impossible to make it as pliable and as soft as Chinese silk.

TWO SYMPHYSEOTOMIES AND AN INDUCED LABOR. BY DANIEL LONGAKER, M.D. (See page 450.)

DISCUSSION.

DR. HORACE FOX:

Symphiseotomy is an excellent operation if it is confined within its proper field. Where

we have a sacro-pubic diameter between two and three-quarters inches, and three and three-quarters inches, and the woman is in *active labor*, it may be of great benefit, but where a case, such as has just been mentioned, is examined prior to labor, I see no reason why the induction of premature labor does not offer less risk to the mother and child. We have heard a great deal about the statistics of symphyseotomy and those of premature labor. In symphyseotomy they take only its later statistics; but in premature labor they go back to the period of its first performance, and then compare the results: surely, such a way is not just to premature labor. The dangers resulting from premature labor are not 50 per cent. as great as they are from symphyseotomy, if the premature labor is induced in that month in which the diameter of the foetal presenting part is equal to or slightly less than the contracted maternal pelvic diameter. In Dr. Longaker's case he induced premature labor only six weeks before the full 280 days of pregnancy, and when the sacro-pubic diameter was less than three inches, and the biparietal diameter of the foetal head measured three and three-sixteenths inches. Such reckoning is hardly compatible, and the death of the infant should not be placed against the statistics of premature labor, but upon those culpable. If the premature labor had been brought on in that month when the biparietal diameter was equal to the sacro-pubic diameter, there might have been an excellent chance of the mother delivering herself of a living infant.

Again, it is said that when a child is born after the induction of premature labor, and which dies within a year after its birth, the result is to be charged to the premature birth. Why should the obstetrician be held responsible for the shortcomings of those persons who have charge of the child after its birth? Why should he be held responsible for all the diseases to which the child is liable to contract, and for those hereditary and congenital diseases with which it is liable to be suffering from? Such is preposterous. When compiling statistics, there should be more correctness and justice.

I cannot comprehend how any physician can either compare the excellent results of premature labor as regards both mother and child, or the dangers to mother and child from such an operation, to the hazardous, un-

precise, and superficial operation of symphyseotomy. The chief danger in premature labor is the liability of infection, but the physician is the culpable party, and not the operation.

DR. CHARLES P. NOBLE:

I was much interested in Dr. Longaker's paper. Perhaps my interest was somewhat excited, because he looks at the matter much as I do. With reference to symphyseotomy *versus* premature labor, I am interested because I was the first person to deliberately elect symphyseotomy over premature labor. Statistics show that the maternal mortality after symphyseotomy is no greater than after premature labor, and the prospects of the child are much better at full term than at any other. On these grounds it seemed rational to select symphyseotomy. I reported the case about a year ago. I had previously delivered this woman by induced labor. I have since reporting the case again delivered this woman by symphyseotomy. She has made an uncomplicated recovery. It is difficult to estimate the relative mortality of premature labor and symphyseotomy. In good hands the risk is not very great for either operation. It seems to me that 1 per cent., in cases where the conditions are as they should be, should cover the maternal deaths either from induced labor or symphyseotomy, and, as I think that there is a prospect of saving about 60 per cent. more children by symphyseotomy, I shall give that method the preference.

With regard to technique, I should like to speak of two points. I agree with Dr. Longaker, that it is wise to begin the incision from above. It was at my suggestion that he selected this method. I think that it is a decided advantage to begin above where you can strike the joint. In one case where I began below the joint was calcareous or I got to one side, for I had considerable difficulty in getting through.

Dr. Longaker's case bled a great deal, and my second case bled a great deal, so at my second symphyseotomy I made a silkworm-gut drain. This was removed in four or five days. I am satisfied that this will favor prompt union. This method is used with advantage by Dr. Edebohls in Alexander's operation. The silkworm-gut furnishes a satisfactory drain, where you expect simply

serous oozing. I would recommend that the drain be used in cases where considerable oozing is expected, or in emergency cases, where you are not quite sure of your asepsis.

In connection with Dr. Longaker's last case I will report my last case which belongs to the same class. I did a symphyseotomy on Tuesday night, and while the symphyseotomy is doing very well, and while the woman is doing very well, it is by no means clearly certain that she is going to recover. If she dies, it will be from sepsis in the uterus. I cannot say that I feel entirely satisfied with my own course in that case. I was called in consultation after the woman had been in labor over a day, and the waters had been drained for many hours. The child, however, was still alive. The presentation was of the brow. The physician had already had the forceps on, but had been unable to deliver. He asked me to try the Tarnier forceps. I found that traction made no impression. As the woman had had five or six children, some alive and some dead, and as the veins over the vulva were enormously distended, I felt that it would be wise to avoid symphyseotomy, and concluded to try version. Although I got a foot, it was impossible to do version, so after working a long time I had to put the foot back and do symphyseotomy. What the outcome will be I cannot say.

DR. RICHARD C. NORRIS:

The question of version *versus* symphyseotomy, with a conjugate diameter of seven to eight centimetres, is an interesting one. I recall five cases which were brought to my notice in the past year. In one I utilized the operation of symphyseotomy, and, after a prolonged forceps operation, delivered a dead baby. In the other four cases I did version. In the first two cases the children were delivered alive, and in the last two they died within a few days. The last case occurred at the Preston Retreat a week ago. The first child had been delivered by craniotomy. The second child was delivered dead after a difficult forceps operation. The third child was born alive at seven or seven and a half months after a fall down stairs. She came to the Retreat in her fourth pregnancy. I examined her and found that she was three weeks over time. I at once made a careful estimation of the pelvis and found the conjugate a little over eight centimetres. It

was a question to decide what should be done. I thought it best to bring on labor at all events. After waiting awhile and no engagement taking place, with vigorous contractions, I concluded that either symphyseotomy or version should be done. Acting on my previous experience, I concluded to try version. She was anesthetized, and, failing to readily grasp the anterior foot, I caught the posterior foot and turned. The child came down in a posterior position of the sacrum. During the birth of the body I decided to secure its anterior rotation if possible, and thus favor an anterior position of the occiput. I wish to lay some stress upon the statement that under similar circumstances this is a manœuvre I would hesitate to employ, believing it better to leave the case alone until the head had passed the pelvic inlet. By forcibly rotating the body there was produced a nuchal displacement of the arm. The left arm was brought down without difficulty, but the right arm was caught between the occiput and the symphysis. I made considerable effort to bring down the arm without avail, and, as the child gasped convulsively and the cord ceased to pulsate, I knew that rapid delivery was necessary, and that it was justifiable to fracture the arm, which I did. The head came through, but required considerable traction and suprapubic pressure. After working twenty minutes the baby revived, and I congratulated myself upon having again demonstrated the utility and safety of version as compared with symphyseotomy with a conjugate of about eight centimetres. The biparietal diameter of the child's head was nine and three-fourths centimetres; its weight nine pounds. Three days later, however, the child developed convulsions from the cerebral injuries it had received and died. This case has made me give considerable thought to the comparative merits of symphyseotomy and version. With a diameter of eight centimetres, where we act in the interests of the child, symphyseotomy must be chosen; where the child may be sacrificed, version may be selected. My own feeling is that we should endeavor to save both. With a child of average size the choice of version certainly jeopardizes its life.

There will be admitted to the Retreat in July a case with a diameter between the tuberosities of the ischii of 7.5 centimetres, and I shall probably do symphyseotomy, and

perhaps, after studying the size of the child, induce labor two to four weeks before full term. I think it worth while in view of this discussion of the relative merits of premature labor and symphyseotomy to throw out these hints with reference to the relative merits of symphyseotomy and version in certain forms of contraction. I should select symphyseotomy under the conditions named as the method most likely to give the best results for the mother and child.

DR. M. PRICE:

There are two or three points to which I should like to refer. I am afraid that the symphyseotomy rage has assumed about the same proportion that Cæsarean section did a few years ago, when a woman had to be in a hurry to have her baby quickly born, or Cæsarean section or some other operation would be done. Where will we put those cases which have been measured and arrangements for symphyseotomy made,—two of them, one in my practice and one in Dr. Leaman's? In my case I had to use the forceps. In Dr. Leaman's case the patient was delivered before he could reach her, a square and a half away; weight nine and a fourth pounds. I think that there are too many symphyseotomies done. The operation has its place, and in the hands of skilled and careful obstetricians will unquestionably be of great benefit to mother and child.

Dr. Noble states in regard to his last case that if the patient dies it will not be the result of the operation. I hold that if we do an operation for the relief of mother or child, and if either dies, that the operation has not accomplished what we intended,—the saving of two lives.

I should like to ask why Dr. Noble applied the forceps in that case and made efforts to deliver and afterwards attempted version? This is something I cannot understand.

DR. G. I. MCKELWAY:

In regard to the method of inducing premature labor, there is a more satisfactory method than by the introduction of a bougie. I have a number of times injected glycerin between the membranes, being perfectly sure that everything was absolutely sterile. In every case labor has come on within three hours; in one case within half an hour. I can see no special danger in this method,

especially if you avoid forcing air through an empty catheter by filling the catheter before introducing it.

DR. BARTON COOKE HIRST:

I wish to say a word in favor of the induction of premature labor, which has received but scant justice in the discussion, I think. I speak from an experience of more than 100 operations. In the last four weeks of pregnancy the infantile death-rate is no greater than it is at full term, if the child's parents can give it good nursing and attention. As for the mothers, I have not myself seen a single maternal death following the induction of labor. I recall a report from a French maternity, I think in Liège, in which there were also 100 operations and more without a death. Dr. Noble's comparison, therefore, of the mortality of induced labor and the mortality of symphyseotomy struck me as particularly unfair and incorrect. I wish I could think that I could do more than a hundred symphyseotomies without losing a single woman; but I doubt my ability to do so. Dr. Longaker also refers to the induction of premature labor in anything but complimentary terms, but he tells us that he induced labor six or eight weeks before full term, which explains his dislike of it. I never induce labor before the last four weeks of gestation. If the pelvis is so small that in addition to premature labor some other operation is required, it is easier to perform it than it would be at term. I desire to repeat that if premature labor is induced within four weeks of term by some safe method (the injection of glycerin not being entirely safe nor always efficient), the mortality of the mothers will be *nil*, and the mortality of the children so small as to be a negligible quantity.

DR. CHARLES P. NOBLE:

I should like to explain my case a little further, as Dr. Price thinks that I acted so unwisely. This woman had been delivered of four or five children, and some were living. The head did not feel unduly large. The labor had been long and there had been great moulding. The brow was jammed down. I thought that I might deliver with the Tarnier forceps, but the effort showed that I could not. The question was, What, then, should be done? Here was a living child which could not be delivered with the forceps. Killing

the baby was out of consideration, so far as I was concerned. We had to consider version, symphyseotomy, and Cæsarean section. In that case I thought it wisest to avoid opening the symphysis on account of the enormous distention of the veins. In such a case the hæmorrhage is severe, and the danger of phlebitis extreme. By using care I thought that I could take some chances with the uterus. After bringing down the foot, it was evident that it was impossible to turn without extreme risk of rupturing the uterus. We therefore had to do either symphyseotomy or Cæsarean section, and I proceeded to do the former. I might say that I had to do all that by myself, but got along very well.

DR. RICHARD C. NORRIS:

In the case reported by Dr. Noble, it seems to me that it was an error to apply the forceps to a brow presentation with the expectation of pulling the largest diameter of the foetal head into a contracted pelvis. Again, if the hand could pass the obstruction and grasp an extremity of the child, it seems to me that it would have been possible to have flexed the head, converting it into a vertex presentation, and then perhaps the forceps would have delivered. I do not know that this was tried. If this should have failed, the presentation might have been converted into one of the face, with the chin anterior, and the application of the forceps might have given birth to a living child. In a brow presentation some such manipulation as this should if possible be persistently tried under ether before resorting to symphyseotomy.

DR. DANIEL LONGAKER:

With reference to the remarks of the president in regard to induced labor, I would say that my condemnation of induced labor does not include all cases. In the paper I referred to cases contracted to the extent of three inches. If the president will recall the features of the case, I think that he will agree that I did not act unwisely in inducing labor eight weeks before term. In this case the true conjugate was three inches or less. The child's biparietal diameter was three inches, and the bitemporal two and a half inches. The difficulty even then was so great that the child died from hæmorrhage in the tissues beneath the scalp. There was decided injury

to that biparietal bone which came in contact with the sacral promontory. Had I waited longer, the child could have not been delivered, even living, as it was. I think, therefore, that induced labor should be condemned, even in cases where the conjugate is not so much contracted as in this case.

One of the speakers suggested that in Dr. Noble's case there might have been some advantage in flexion of the head. I think that it is well recognized that the position of partial flexion which takes place in flat pelvis is the best adaptation which can occur, for by that means we have brought into relation with the contracted conjugate the bitemporal and not the biparietal. Where the vertex or face is brought down, the biparietal comes into relation with the true conjugate.

After completing my paper, I had an interesting case bearing on the point of version *versus* symphyseotomy, and, had I seen the case originally, I should have advised symphyseotomy. The woman had given birth to seven children, and all are dead. Her labors were instrumental, and in only one had the child been born alive. In that instance the head had been so badly injured with the forceps that it survived only a short time. The patient has a flat pelvis, with a true conjugate a little under three and a half inches. This woman in the labor in question was under the care of an intelligent midwife.

The membranes ruptured and the cord prolapsed, and I was sent for. I did not see the patient until two hours after the rupture of the membranes. I found it impossible to replace the cord; the head was entirely above the brim; the cord was still pulsating, and the foetal heart could be heard. The cord was beating feebly, and so I did version. In doing version it is important to have competent assistance. Here I had the aid of Dr. Robertson, who on extraction of the body made powerful suprapubic pressure on the head, and I was able to deliver the child alive. I am not sure that the child's head did not suffer injury, and that it may not develop cerebral palsy. The child is a vigorous one, weighing eight and one-fourth pounds. The biparietal diameter was three and a half inches, and the bitemporal a little over three inches. At one point the biparietal bone looked as though it had been fractured. Had I seen the case earlier, with the history and the measurements of the pelvis, I should have performed symphyseotomy. It may yet prove that this would have been wiser.

FÆCAL FISTULA. BY MORDECAI PRICE,

M.D. (See page 472.)

Adjourned.

FRANK W. TALLEY, M.D.,

Secretary.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

A CLINICAL LECTURE.¹

BY J. P. CROZER GRIFFITH, M.D.,

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[Reported by W. HENRY PRICE, B.A., M.D., Assistant Physician to the Children's Dispensary of the University Hospital.]

GENTLEMEN :

I am happy to be able to show you this morning this little boy, 4 years of age, who had been sent to us by his physician in Burlington, N. J.

I find that his family history is very good. His father and mother are healthy people, and the nearest tubercular taint in the family is in the paternal grandmother, who died of phthisis. This child apparently was entirely well up to 18 months of age, at which time he suffered from scarlet fever and was evidently quite ill, or, at least, did not rapidly regain his health; since his mother says that recovery was not complete for three months. Just what was ailing him all this time we do not know. We

do learn, however, that somewhere about this period, or when he was about 2 years old, the child's abdomen became constantly much swollen, and has remained so up to the present time. It is not clear what the cause of the swelling was, though several physicians who have attended him told the family that he had dropsy of the abdomen. The last physician, however, and the one who referred him to us, did not detect fluid, but said that he had considerable tenderness at times in the abdomen; although this has not been, as far as I can learn, at all a prominent feature. So, too, we cannot elicit any distinct history of decided fever, although the child's health was evidently suffering from some cause. About one year ago the bowels became very loose and

¹ Delivered at the University Hospital.

watery, and this condition has continued with a greater or less degree of severity. The mother says that there are sometimes as many as forty passages in the course of twenty-four hours, and that she has known the child during one night to nearly fill two large chambers with the faecal evacuations. This seems hardly credible, yet it shows that the amount passed has evidently been sometimes very large. The diarrhoea has persisted more or less for the last year, although not always so severe as this. The child has had an irregular and capricious appetite, and has been steadily losing health and strength, and has grown quite thin.

As you look at him you see a pale and thin little boy, and yet not one which shows the extreme emaciation which often develops in chronic diarrhoea. You notice, even before us, that he is fretful and disposed to cry. He has, indeed, all the appearances of an ill child,—and one which has been ill some time. On inspecting the bared abdomen you notice that it is very greatly distended and that the superficial abdominal veins are prominent. You see, too, this little umbilical hernia, as evidence of the pressure from the inside which has been put upon the abdominal walls.

The case is a difficult one to understand because we have an imperfect previous history, and the absence of certain data which would throw light upon it. The first thing for us to do is to determine whether this abdomen now contains fluid or only gas.

This is by no means always an easy matter in every case, especially when the abdomen is as tense as here. In such a case the gas present under pressure does not give a highly tym-

panitic note, but a somewhat impaired one, so that it is easy to imagine that fluid is present.

Moreover, you observe that as soon as I make an attempt to palpate or percuss the abdomen of our little patient, he vigorously protests, and tightens his abdominal walls until they are as resistant as a board. It is a good example of the difficulties of which I spoke to you recently. To succeed at all in the examination of such a case, it is necessary to put the warm hand gently over the abdomen, even outside of the clothes sometimes, and then distract the child's attention. If possible, it is well to make the examination during sleep, although this cannot often be done. From my examination before you I could determine nothing. I will tell you that before we came into the room, and he became afraid of us as he now is, I chatted with the little fellow and palpated his abdomen. I did not find it painful even upon firm pressure, and I could detect nothing abnormal in the way of an enlarged liver or the existence of nodular masses anywhere. I also percussed the abdomen and found no evidences of abnormal dulness, although the note is a dull tympany on account of the great tension of the contained gas, and I could detect no fluctuation. We have, however, from the history the opinion of some physicians that the child had dropsy, and it is possible that there may have been fluid at some time. We must, therefore, consider what could have been the cause of this.

Fluid in the abdomen would come from several sources. In the first place, heart-disease might readily produce it. But were that the cause in

this instance we should be able to detect some signs of heart-disease on auscultation, and that we cannot do. Moreover, the child would be certain to exhibit œdema of the ankles and of other parts of the body. So, too, Bright's disease would certainly be accompanied by dropsy elsewhere if attended by ascites. Cirrhosis of the liver, though a rare disease in childhood, might of course be present in this case, and would produce a dropsy limited to the abdominal cavity. But as there is no fluid now here, and we can find no evidence of alteration in the size of the liver, we shall not consider this disease further. Perhaps the most frequent cause of abdominal dropsy in children is tubercular peritonitis. This often produces a very intense ascites. Often, however, the disease is of the cicatrizing form, and is attended by little or no effusion of fluid, although the abdomen may be greatly distended by gas.

At present, as I said, we find no fluid here. Let us consider then what can be the cause of this excessive gaseous distention.

The collection of gas may be either within the intestinal tube or in the peritoneal cavity. The latter may come from a perforation of the walls of the intestine, but is a very rare occurrence. Occasionally the stomach may be so greatly distended as to occupy nearly the whole abdomen; but in nine cases out of ten this tympanites is due to a flatulent distention of the intestines, in which case the skin is tense, the umbilicus is level, or slightly prominent, there is no tenderness on pressure, and percussion gives a tympanitic note.

Chronic enterocolitis gives flatulency as a symptom, and at times may

be so marked as to cause intense pain. Another cause of distention is from great atony of the muscular walls of the intestines, thus allowing the contained gas to exert its pressure easily.

Rickets, too, constantly gives a distended abdomen, but this can be left out of the question in the present case,—first, because our patient has already reached that age when rickets begins to disappear; and, second, because he is too sick a child for such an explanation. Abdominal distention from an overfull bladder would be an acute affection, and chiefly limited to the hypogastric region, and would give dulness on percussion. Now, this child certainly has a chronic enterocolitis. His symptoms point to this beyond a doubt. With the prolonged disturbance of the bowel, it is not uncommon for a partial paralysis of the muscular wall to ensue, which allows of great and constant distention. The question which we must consider is whether we have to do with some tubercular ulceration causing all this diarrhœa, or whether it is a *simple* enterocolitis.

It is clear that his colon is affected, for I do not believe that a persistent diarrhœa can exist without some involvement of this part of the bowel. If the colon is healthy and shows no increased peristalsis, it would perform its normal function, and would allow the watery portion of its contents to be absorbed before the stools were voided.

The probability is that the small intestine is also involved, because the movements are so numerous and so copious, and from the fact that the child has lost so much flesh, which shows that the minimum amount of nutrition has been derived from the

food, owing to its being hurried through the small intestine by an irritated peristalsis.

I feel inclined to the view that this is a case of *tubercular* enterocolitis. The diagnosis, however, is not always easy to establish, as the symptoms are very varied. The most common one is persistent diarrhœa; but this is not always proportionate to the extent of ulceration, and, indeed, large tuberculous ulcers may exist in the ileum with constipation. Sometimes hæmorrhage occurs, and peritonitis from extension of the disease is not uncommon, in which case the mesenteric glands are often involved. Enlarged abdomen, which is often painful, is quite commonly present, as in this case, and at times nodular masses are detected. Loss of appetite and vomiting, sometimes even of blood, are occasionally associated symptoms in rare cases.

The prognosis in any case is unfavorable, but varies somewhat according to whether the enterocolitis is a simple one or of a tubercular nature. If the former, the prognosis is grave, as after so long a time large ulcers often develop which can scarcely heal; but the case is not a hopeless one. If it is a tuberculous disorder, the prognosis is the more grave, and we can do little for the child. Death may be caused by the severity of the intestinal symptoms, or by such accidents as hæmorrhage or perforation of the intestinal wall.

The treatment of this case is not easy, and I do not wonder that it has puzzled his physicians. He has had cod-liver oil, which disordered the stomach, and so I propose to omit it for the present until his digestion has improved. It is important to check this excessive diarrhœa, but we do

not gain anything by pushing the opiates, and these should only be used in painful exacerbations which may occur. I do not like to use lead for a prolonged period for fear of plumbic poisoning, although it is not very likely to occur.

I think a better treatment is nitrate of silver, one-sixteenth of a grain, in pill form, with half a grain of Dover's powder, taken about two hours after each meal. This form of treatment is perhaps the best way of reaching the lesion of the small intestine; but so far as the colon is concerned, a more direct method of medication is by intestinal lavage and astringent enemata. These may be employed three or four times a week. The bowel is first emptied and cleaned by an enema of warm water and Castile-soap; the water used should be about the temperature of the body; and this operation, in order to secure success, should be performed either by the physician or by a trained nurse. After the large intestine has been thoroughly irrigated by the use of two or three quarts of this soapy water, the excess returning by the side of the flexible catheter passed into the rectum, a half pint of warm water, in which is suspended one or two drachms of bismuth subnitrate, or thirty grains of tannic acid, should be injected into the bowel and allowed to remain there.

Besides the therapeutics of such a case as this the diet needs careful regulation, and for the present our patient shall be put upon a quart of boiled milk per day,—boiled, not to kill the germs, but because it is apt to be more constipating in this form. He should also have scraped meat very slightly cooked, and avoid all fruits, especially bananas.

SOCIETY PROCEEDINGS.

New York Academy of Medicine—Section on Pædiatrics.

DR. JOSEPH E. WINTERS, CHAIRMAN.

Meeting of April 12, 1894.

DR. CHARLES E. NAMMACK presented a case of Friedreich's ataxia. The patient was a girl 14 years of age. She was perfectly well until she was 5½ years old, with the exception of an attack of measles at 5 years, and scarlet fever a few months later, from both of which she made a good recovery. The family history was excellent. Three younger children were past the age of 5½ years, and were perfectly healthy. The first symptom noticed was unsteadiness in walking. This has slowly but steadily increased. She now walks with considerable difficulty. The feet are placed quite far apart. The gait is very ataxic, but is not spastic in character. She stands alone with difficulty, and cannot stand with the eyes closed. There is little or no ataxia in the hands, the grasp is fairly strong, but there are numerous choreic-like movements; the child has, in fact, been treated by several physicians for chorea. She threads a needle, but with some difficulty. The feet are typical of this disease, being short and stumpy, the instep being drawn up and thick, and the toes being markedly extended, the whole foot being abnormally arched. The feet are inclined to be cold and purplish. The knee-jerk is entirely lost. There is moderate lateral curvature. Nystagmus appears when the patient looks up. The voice is hoarse, but the

speech is not scanning in character. The face has not so much a vacant as anxious expression. There are never any attacks of laughter. The special senses are normal. There is no optic neuritis. There is no loss of sensation, the symptoms being entirely motor. There are no lightning pains. The bowels and bladder act normally. There is no headache nor vomiting.

The case seems to be very clearly one of Friedreich's ataxia. It is a very rare disease, but, no doubt, sometimes occurs, and is not diagnosed. The prognosis as to recovery is bad, though the fatal end may be long delayed.

The subject for discussion was

CEREBRO-SPINAL MENINGITIS.

Dr. Herman M. Biggs read a paper on

ANATOMY AND ÆTIOLOGY.

The disease presents no distinctive bacteriology or ætiology. The cultures are sometimes entirely sterile. Bacteria are usually found, however. They vary in different cases, and no one germ can be considered the cause. The pneumococcus of Fränkel is by far the most common micro-organism in these cases. The streptococcus is the next most frequent. The staphylococcus albus and aureus are next in

frequency. The pneumococcus of Friedlander, and the bacillus of typhoid fever have also been found as well as other germs. In so-called simple meningitis it often happens that the exudate is found greatest in the lumbar and dorsal regions of the cord. The pathologist who does not examine the whole length of the cord will frequently fall into error, for the cervical region is sometimes free from exudation, while the brain and lower portion of the cord are involved. There are no facts, anatomical or bacteriological, which warrant us in separating cerebral and cerebro-spinal meningitis. There is no such specific disease as cerebro-spinal meningitis. Cerebral and cerebro-spinal meningitis are practically the same condition. The author reported twenty cases upon which he had made autopsies during two epidemics, one during the spring of 1892, and the other in the spring of 1893. About two-thirds of these were purely cerebral, the rest were cerebro-spinal.

Dr. H. W. Berg read a paper on

SYMPTOMATOLOGY,

based upon seventeen cases seen in the epidemic of 1893. The average number of deaths from this disease during the past five years in New York has been 230. During 1893 there were 469 deaths, 107 of which occurred in the month of May. The age of most of these patients was under five years. This epidemic followed an epidemic of influenza, and was synchronous with an epidemic of pneumonia. Epidemics of this disease rarely cover a large area, more than one case in a family being rare. There is no proof that it originates from bad surroundings or that it is contagious.

In the epidemic of 1893 the disease was chronic. None of the cases died under two weeks, some survived for many months.

Three classes of symptoms are common:

(1) Those due to the presence of an acute infectious disease.

(2) Those due to inflammation of the spinal cord.

(3) Those due to inflammatory condition of the brain.

Under the first group of symptoms are chill, convulsion, fever, nasal catarrh, and eruption. In the second class of symptoms are rigidity and disturbances of the bowels and bladder. In the third class are headache, slow pulse, and optic symptoms.

Headache is, as a rule, the first symptom, and in young children convulsions are common at the outset. Pain in the back of the neck with rigidity is common. The frequency of nasal catarrh seems to point to the nose as the point of entrance to the contagion. The eruption is not constant, many cases presenting none whatever. Joint symptoms resembling those of rheumatism are frequent. The eyes in some epidemics present various serious lesions. In 1893 ulcerative keratitis and optic neuritis were especially common. The ear was less frequently affected than the eye. Croupous pneumonia as well as catarrhal pneumonia was common.

Dr. J. Lewis Smith read a paper on

TREATMENT OF MENINGITIS.

The intense congestion is to be relieved by the use of ice-bags applied to the head and spine. A long bag partially filled with ice may be applied with great advantage to the spine and the ice-cap to the head. A hot mus-

tard foot-bath at the outset is an advantage, and in case of convulsions a child should be placed in a warm bath. Leeches to the temples and back of the ears are not to be advised. The disease is asthenic and protracted, and blood should not be withdrawn. Bromide of potash or soda is the chief reliance. It should be given in large doses. He sometimes gives four grains every hour at one year. Ergot is also of advantage in some cases. He frequently uses the following :

R. Phenacetin . . .	℥ iv.
Sodii bromid. . .	℥ iii.
Caffeine	gr. xx.
Ol. cinnam. . . .	gtt. x.
Sacch. lact. . . .	℥ i.

M.—Ft. chart. No. X.

Sig.—One every four hours.

Quinine is not a proper drug in these cases. It is sometimes necessary to give chloral when the child is restless and does not sleep. In late stages iodide of potassium may be given. Nutrition should be maintained at the highest point possible, for these children often die of exhaustion. The speaker remarked that the disease had changed in recent years in one important particular. The eruption is now rarely seen. In 1872 the eruption was so common that the disease was frequently called "spotted fever." That name could not properly be applied to it at the present day.

Dr. William P. Northrup said that he had seen numerous cases of cerebro-spinal meningitis under one year, but no case of "spotted fever." The eruption is very rare. In over two thousand autopsies, chiefly at the New York Foundling Asylum, there were but eight or nine cases of cerebro-spinal meningitis. One of these was complicated with measles, one with broncho-pneumonia and double otitis

media, two with fibrinous pleurisy, and one with double pneumonia. The two most important symptoms, he believed, were bulging of the fontanelle, retraction of the head and stiffness of the neck.

Dr. Henry D. Chapin had seen numerous cases from time to time, but not as an epidemic. The retina in his experience had been frequently involved, and blindness has often followed. Hydrocephalus has also occurred.

Dr. A. Brothers had frequently observed serious nasal catarrh. His cases had frequently been accompanied by lobar pneumonia. The pupils have been varied in appearance. He was inclined to use leeches back of the ears and ice-bags upon the vertex and nape of the neck. He regarded iodide of potash as most useful, and began its use early and in large doses.

Dr. J. W. Brannan asked whether some of the cases reported which had run a long course may not have had tubercular meningitis.

The Chairman had frequently seen ecchymotic spots. Morphine he believed was the only drug which would relieve the pain. It was a safe drug to administer, and was far more reliable than bromides.

Dr. J. H. Fruitnight said that he formerly used bromide, but during recent years had relied chiefly upon morphine. He found it safe and far more reliable than any other drug. Nearly all cases in 1872 had had petechiæ.

Dr. Northrup said that an important point in pathology was the fact that meningitis has the same origin as the suppurative diseases, the pneumococcus being the germ most frequently found.

ABSTRACTS FROM CURRENT LITERATURE.

Laparotomy in Tubercular Peritonitis in Children.

CONITZER (*Deutsche medicinische Wochenschrift*, No. 29, 1893) reports seven cases of tubercular peritonitis in children, who were operated on by Alsberg in the Israelitischen Krankenhaus of Hamburg. Of the seven cases, two were boys and five were girls; the ages ranged between $2\frac{1}{4}$ and 9 years. In all the tubercular characters of the disease were shown partly by microscopic examinations and partly by the appearance of tubercular bone-disease after the cure of the abdominal trouble. Four were of the exudative, and three of the dry

variety. All four exudative cases were cured by simple laparotomy. Three-quarters to two years having elapsed since the operation. Of the three dry cases, one improved and two died. The operation was well borne in all instances. The author concludes as follows:

Laparotomy is indicated in tubercular peritonitis. Cure is rare in the dry, but frequent in the exudative form. Marked debility and some tubercular affections in other parts are to be regarded as contraindications.

Ætiology of Chorea.

DANA (*American Journal of the Medical Sciences*, January, 1894) reports a case of chorea which he maintains affords support to the theory that the specific agent producing chorea is a microbe. The patient, a male, had acute rheumatism in his tenth year, chorea in his fourteenth year, and repeated attacks every two or three years.

He came under observation when 34, and had been suffering from an attack of chorea for eight months. General violent choreic movements affected the face, tongue, and neck especially, but also the arms, trunk, and legs. There were tonic spasms of the head and neck, and rhythmical movements of the head and arms at times. There was no paralysis, no anæsthesia, and no endocarditis. Mental development was good, and

the movements ceased during sleep. The patient died of exhaustion. Post-mortem examination revealed meningitis of the brain and upper part of the cord. In places the cerebral cortex was involved, showing an active connective-tissue overgrowth and diplococcus (probably *diplococcus lanceolatus*) in the membranes and cortex. There was evidence of degenerative change in the cortex, extending in diminishing intensity to the deeper parts of the brain, to the capsule and lenticular nucleus. About the sixth and seventh cranial nerves, also, there was much meningeal thickening, with marked periarteritis. One root of the vagus contained some degenerated fibres. Periarteritis was marked in the neighborhood of the anterior pyramids.

For the Summer Diarrhœa of Nursing Infants.

TOUSSAINT (*Gazette de Hôpitaux*) has obtained excellent results in diarrhœa of nursing infants and those artificially fed.

A coffeespoonful of the following formula to be administered after each nursing. The milk given to the pa-

tients is to be limited, and the intervals between the feeding lengthened.

B. Papain pur.,	gr. ix.	
Acidi lactic.,	3 ss.	
Syrupi,	f 3 iss.	
Aquæ destil.,	f 3 v.	
Tinct. vanillæ, q. s.		M.

The Treatment of Chronic Hydrocephalus by Basal Drainage.

PARKIN (*Lancet*, November 18, 1893) reports a case of hydrocephalus treated by the method first described by him, in which the intracranial pressure is relieved by the withdrawal of cerebro-spinal fluid from the basal subarachnoid space. The child was eleven months old. The greatest circumference of the head was 17½ inches, the temporal fossæ were obliterated, the anterior fontanelle was large, and the membrane covering it was tense. There was marked separation of the two halves of the frontal bone, and to a less degree of the parietal bones. The eyes were prominent. The child was fairly intelligent for its age, and up to the time when seen had had no fits, but was always restless and irritable. Sight and hearing were good. The mother gave a history of tubercle on both sides of the family, and stated that the cerebral enlargement began when the child was five months old. There was no history of syphilis. When admitted to the hospital the child lay perfectly

quiet in bed, never moving nor crying even when roughly shaken. Chloroform was given, and an incision made one inch below the superior curved line of the occiput and half an inch to the right of the middle line. The bone was easily gouged away, exposing the tense dura mater. After incision of the latter and the passage of a probe into the subarachnoid space, a considerable quantity of clear fluid exuded. A horse-hair drain was inserted into the subarachnoid space and was brought out at the inner end of the wound, which was sewn up with a continuous suture. The drain was removed eighteen days after the operation, no fluid having come away for the three days before its removal. The improvement was remarkable. The child was seen three months after the operation, and although the head had not diminished in size, there was no indication of any recurrence of the effusion. The child was much more intelligent, and was rapidly gaining in weight.

Surgery of the Kidney in Children.

IN the *Revue Mensuelle des Maladies de l'Enfance*, November, 1893, Aldibert concludes his observations on renal surgery in children. Referring to the results of operations for malignant disease, he says that 45 nephrectomies gave 20 deaths, 4 incomplete operations, and 1 operative cure. Of the 20 fatal cases, 13 died of shock, 4 by septic peritonitis, 1 by volvulus, and 2 from some undetermined cause. The 4 incompleting cases died, 2 from shock and 2 from the progress of the disease. This gives 22 post-operative deaths, or a mortality of 48 per cent. Children bear nephrectomy for other causes well, and even in this list there are 8 recoveries of children from six months to two years of age. Recurrence of the disease is the rule. Of 21 operative recoveries, 11 died within nine months, and 1 lived as long as eighteen

months, 8 were 'lost sight of within four months, and but 2 appear to be cured, having remained without recurrence eighteen months and two years after the removal of the growth. Operative accidents or fatal difficulties are also to be encountered. Three cases of benign tumors, 2 of which recovered, and 1 died of septic peritonitis. The author concludes as follows:

(1) That surgical kidney occurs in children as well as in adults, and it presents, with slight exceptions, the same clinical picture.

(2) That the same surgical intervention is justifiable. Nephrotomy as well as nephrectomy is well supported by children even in infancy. Malignant tumors alone present such a degree of gravity as to require the surgeon to refrain from operative procedures.

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ORIGINAL COMMUNICATIONS.

The Indications for Cæsarean Section.¹

BY B. C. HIRST,
PHILADELPHIA.

I KNOW of no problem in obstetrics that gives more concern to the conscientious man than the choice of the proper operation in those cases near the border line between the absolute and relative indication for Cæsarean section. There is unlimited opportunity for mistake, and I suppose the time will never come when error can be surely avoided. A collective experience, however, and a wide interchange of views among those to whom this problem is frequently presented, will do much in the course of time to establish rules of practice that will make a decision easier than it is to-day. It is the purpose of my brief communication to contribute something to this end by eliciting, I hope,

a free expression of opinion from those of our members who have learned from practical experience the difficulty of judging correctly as to the proper treatment for obstructed labors. I have seen this winter six cases in which Cæsarean section was seriously considered.

In four the operation was performed; in each instance for an absolute indication. In two cases a mistake was made: in one by performing symphysiotomy when Cæsarean section was demanded; in the other by proposing to perform Cæsarean section, when, as the event proved, symphyseotomy was the appropriate operation.

As our mistakes are usually more instructive than our successes, and as these two cases bear directly upon my theme, I shall confine myself to their

¹ Read before the Obstetrical Society of Philadelphia, May 3, 1894.

description, endeavoring to draw from them some helpful information about the decision for and against Cæsarean section, in a case of doubt, as to the practicability of delivery by other means.

I assume, of course, that the operator desires, as he should, to avoid, if possible, Cæsarean section, an operation of high mortality still, in spite of improved technique and more perfect asepsis.

CASE I.—This case has been already reported in detail elsewhere, and has been referred to here, so that I shall dismiss it in a few words.

The diagonal conjugate diameter was nine centimetres, but the true conjugate proved to be less than six. There was an exceptional, but by no means unique, difference between the diagonal and true conjugate of more than three centimetres. I succeeded in delivering the woman after opening the symphysis, but only by destroying the child. I was led by this experience to devise a new pelvimeter for measuring the true conjugate. This instrument has been used repeatedly in the last six months by myself and others with entire satisfaction. I believe that it enables us to measure the true conjugate with an accuracy hitherto not obtainable.

CASE II.—This woman, a Philadelphia Hospital patient, I proposed at first to deliver by symphyseotomy at term. She refused, however, and went more than three weeks beyond it, before spontaneously falling into labor. During the first part of this period I repeatedly urged her to let me induce labor, intending to open the symphysis when the cervix was well dilated. She stubbornly refused my proposition. At length, however, she became

alarmed herself at the delay, and volunteered to let me operate on her. By this time the foetus was overgrown, and by abdominal palpation I got the idea that it was larger than was really the case. The abdominal walls were very fat, and there was considerable liquor amnii, so that the palpation was unusually difficult. Fearing the impracticability of delivery by symphyseotomy I told the woman that her chance for a comparatively safe delivery had gone by, and I felt compelled to resort to Cæsarean section. She agreed to this, with the stipulation that I should wait three days longer. The next day she fell in labor, and the following day she delivered herself spontaneously. This bald statement sounds as though a serious mistake had been made in proposing operative treatment at all, but the history of the case shows that the only error was in proposing to do Cæsarean section instead of symphyseotomy. The woman had had six children previously, the first three delivered by difficult forceps operations, the last three by embryotomy. She had a rachitic pelvis, with a true conjugate estimated to be scant nine centimetres. Her children had all been large, though she had not before advanced beyond term. When she fell in labor two days before the term she had agreed upon for the operation, I urged her to let me operate at once. She refused, but agreed to have the operation done if she were not delivered in twenty-four hours. To this we perforce assented. Knowing what was ahead of her if the child were not born spontaneously, the woman made superhuman efforts during the whole of her labor to deliver herself. With every pain she exerted an expulsive

force that was truly phenomenal. After sixteen hours of such effort the head still remained above the brim of the pelvis, when, in consequence of a tremendously violent action of the uterine and abdominal muscles combined, the head was fairly shot through the inlet and cavity of the pelvis, and the child was born in five minutes. It died, however, shortly after birth from head injury, and the woman herself soon developed symptoms pointing to a rupture of the uterus. Her temperature was 104° F.; she was wildly delirious; there was great tympany and abdominal tenderness, and a foul discharge. After an illness of some

two weeks the woman recovered. She had run a risk meanwhile much greater than my proposed operation would have entailed upon her, and her child was practically destroyed in labor.

I undoubtedly could have delivered this woman by symphyseotomy. I made the mistake of proposing to do Cæsarean section, instead, in obedience to a rule that governs my practice in such cases: If there is good reason to doubt the practicability of delivery after symphyseotomy, by reason of extreme pelvic contraction or overgrowth of the foetus, perform Cæsarean section.

Strangulated Umbilical Hernia.¹

BY REUBEN PETERSON, M.D.,

GRAND RAPIDS, MICH.,

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IT will not be the object of this paper to treat exhaustively the subject of strangulated umbilical hernia, but to consider briefly a few of the problems which ever present themselves to the surgeon called upon to operate for the relief of this condition. These problems are not peculiar to umbilical hernia, but are present in all cases of hernia where a strangulation of the bowel exists. The following case will serve as a text, and the consideration of the difficulties it presented, and the method adopted for overcoming them may prove of some interest.

Mrs. B., residing at Pearl, Mich., a large fleshy woman, weighing at least 250 pounds, had had an umbilical hernia for some years, but it had never been a source of much inconvenience. January 8, 1894, the patient was seized with severe pain in the region of the umbilicus. The bowels refused to move in spite of large doses of calomel administered by her physician. The latter tried to reduce the hernia under chloroform, but was unsuccessful. The hernial sac was aspirated, and a number of ounces of clear fluid withdrawn. Seven days after the initial seizure she was seen in consultation by Dr. W. H. Bills, of Alle-

¹ Read before the Michigan State Medical Society, May 4, 1894.

gan, who decided that operative interference was imperatively demanded. He immediately telegraphed me to come at once prepared to operate. After a ride of three miles from Fennville, we arrived at the patient's house, which was small and as unpromising a place for the performance of an abdominal section as any I have ever seen. But as we were provided with an aseptic outfit, in a very short time the patient was prepared for the operation. Her condition was far from good, as she had vomited almost constantly for eight days. The pulse was 110 and weak. Examination showed a tumor in the region of the umbilicus the size of an egg. The skin over the tumor was of a dark color, and a hole in its centre showed where it had been aspirated. I was assisted in the operation, which was commenced about 4 A.M., the by-standers holding the lamps, by Dr. Bills and Dr. J. B. Whinery, of Grand Rapids, who had accompanied me to give the anæsthetic. A three-inch incision was made over the tumor, and the tissues carefully divided until the hernial sac was reached. This was opened, and a loop of dark-colored intestine came into view. The adhesions were carefully separated, and the hernial opening, which would admit the tip of the forefinger, was enlarged with the scissors and scalpel, and the bowel brought up upon the abdominal wall. The bowel was badly discolored over an area of about three inches. There were three or four spots, the size of the head of a shawl-pin, which looked especially dubious, as if necrosis had already taken place. But after the constriction was removed, and the wounded bowel had been packed in hot sponges for ten or fifteen minutes,

its color became better, and it was considered safe to return it within the abdomen without resecting, which was done after dusting the injured part with aristol to prevent adhesions. The sac and a small portion of the omentum were freed from adhesions and removed. The incision was closed with silkworm-gut sutures passed through all the tissues. There was but little shock at the close of the operation, which was about an hour in length. Five hours after its completion the bowels moved freely several times.

The patient made an uninterrupted recovery, the stitches being removed on the eighth day. There was slight suppuration about one stitch-hole, otherwise there was perfect union. The patient, for fear of a return of the hernia, was kept in bed three weeks.

In reviewing this case the following points naturally suggest themselves:

(1) ASEPTIC OPERATING UNDER UNFAVORABLE SURROUNDINGS.

No place could have been more unsuitable for an aseptic operation than the one mentioned, yet, except for an impure atmosphere, the operation was as aseptic as one performed in a well-appointed hospital. This result was obtained by carrying with me an aseptic operating outfit containing everything essential for clean surgery. For an elective operation there is time and to spare for adequate preparations, but for emergency cases there is no time to be lost, and it is the duty of the surgeon, called upon to treat these cases, to have an outfit which will enable him to do the best work with the smallest amount of danger to his patient. As in the case described, the commonest household utensils may

be wanting, and even those at hand are usually in such a condition as to unfit them for surgical use. Such an outfit as I have mentioned should contain a boiler for sterilized water, a sterilizer in which can be packed gowns, towels, and sheets, and all pans necessary for sponges and instruments. These, with the instruments and other accessories, can be packed in a very small compass, if the necessary thought and attention to details be given to the problem. The outfit I speak of can ride easily in the front of an ordinary buggy, and, therefore, can go wherever the surgeon can. Arriving at the scene of the operation, by the time the patient is ready, the surgeon is also prepared, and is conscious that everything coming in contact with the wound is surgically clean. So important do I consider an outfit, such as I have just outlined, that I have written a description of it, which, together with a number of photographs, will shortly be published in the *American Journal of the Medical Sciences*.

(2) THE APPEARANCES OF THE CONSTRICTED PORTION OF THE BOWEL, WHICH WARRANT THE SURGEON'S RETURNING IT INTO THE PERITONEAL CAVITY, WITHOUT RESECTING.

However great may be the operator's experience in cases of strangulated hernia, there will be cases where it will be a most difficult and perplexing problem to determine whether the integrity of the bowel wall be impaired or not. The best way of determining the injury caused by the constriction would seem to be to envelop the injured segment in hot sponges, after releasing the constriction and drawing the bowel out through the incision,

and closely observe any changes of color in the bowel wall. It should not be decided too hastily that the injury has been permanent, and that an artificial anus or a resection must be made. In the doubtful cases we are considering, a few minutes time may be of great value in determining what course to pursue. Even should there be dark, necrotic-looking spots remaining, after the circulation has returned to the major portion of the affected part, it must be borne in mind that these may only be superficial, and the underlying intestinal layers unaffected. Except in extreme cases, five or ten minutes can profitably be spent in waiting and observing the re-establishment of the circulation or its failure, the patient in the mean time being kept lightly under the anæsthetic. For it is a vital question that is being considered. The time may come when we will unhesitatingly resect at once in all these doubtful cases, but at the present time the statistics of resection are far from flattering in this class of cases. It may not be as brilliant surgery to wait for a few minutes and be in doubt, but I am convinced that it is safer for the patient.

(3) THE INTEGRITY OF THE BOWEL BEING IMPAIRED, WHAT OPERATIVE PROCEDURES SHOULD BE ADOPTED?

This must depend upon the amount of shock present and the skill of the operator. An artificial anus and a subsequent resection will probably give the best results in the hands of those unaccustomed to intestinal surgery. We should strive for ideal surgery, but a human life should not be sacrificed needlessly. An expert may resect the bowel with success in

the same time a less experienced operator would consume in making an artificial anus, but that does not prove that all operators good and bad should resect.

Dr. H. H. Clutton¹ carefully considers the advantages to be obtained from immediate resection over an artificial anus and a subsequent resection within five to seven days. He favors the latter method in certain cases, and shortens the usual time between the primary and secondary operations in order to avoid the adhesions which are so apt to form and augment the danger and difficulties of resection, if a longer time be allowed to elapse.

(4) THE PREVENTION OF THE RECURRENCE OF A STRANGULATED HERNIA.

When the constriction is released

and the bowel returned within the abdomen, unless the patient be too much shocked, the surgeon naturally in closing the abdominal wound keeps uppermost in his mind the desirability of preventing a recurrence of the hernia. It would be beyond the province of this paper to speak of even the principal methods at present in vogue. The presence or absence of peritonitis, the amount of adipose tissue present, and the condition of the patient will have much to do in deciding the operator which method to employ. All good methods have one point in common in whatever else they may differ,—namely, the endeavor to accurately approximate the fascia transversalis. If this be accomplished and the wound heal by primary union, the chances are largely against a recurrence of hernia.

Treatment of Tubal Disease.²

BY HERMAN E. HAYD, M.D., M.R.C.S. (ENG.),

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THE true pathology of tubal disease was brought to our notice through the labors of Goupil and Bernutz, and, after fifteen years of bitter controversy, the profession has finally accepted their conclusions; and from those deductions the history and wonderful development of pelvic and abdominal surgery have resulted. The old terms, pelvic cellulitis, para- and perimetritis, about which so much was

written, and whose clinical pictures were so elaborately delineated by the authors of our text-books, have fallen by the wayside; and a nomenclature based upon the pathology and morbid anatomy of the structures involved has resulted,—endometritis, salpingitis, ovaritis, and peritonitis.

The intimate association which exists between the uterus and its adnexa, by reason of their lining mucous membranes, together with the rich, vascular, and lymphatic supply, makes the pathology of the one organ

¹ *Annals of Surgery*, April, 1894.

² Read before the Buffalo Academy of Medicine, March, 1894.

of the greatest importance in considering the morbid phenomena of the other. Endometritis, whether of septic, puerperal, or gonorrhœal origin, is in the vast majority of cases the starting-point of tubal and ovarian disease; and in fact the latter are but an extension of the inflammatory process by continuity of structure.

According to Pozzi, it is questionable whether a primary ovaritis can exist; and, although the tube may be found healthy at the time of examination, yet at some stage in the history of the case, endometrial and perhaps tubal inflammations were present. The lymphatics are also the carriers of infection from the endometrium, through the body of the uterus to the peritoneum, or along the broad ligament to the ovaries; and thus we may have a cellulitis or even an ovarian abscess, and the tube be quite healthy; but the focal or starting-point was the uterine mucous membrane. Salpingitis may be cystic or non-cystic, and upon these anatomical and clinical features is based Pozzi's eminently safe and practical classification.

The treatment of salpingitis, therefore, of necessity involves the most thoughtful consideration of the endometrium, because usually there exists, combinedly, endometritis, metritis, salpingitis, ovaritis, and peritonitis in more or less severity.

In acute septic or gonorrhœal endosalpingitis, the most radical measures must be resorted to early, for these inflammations so rapidly cause total destruction of the tubes and adjacent structures. Therefore, dilatation and curettement and uterine drainage, as provided for by Polk's operation, not only cut short the endometritis, but

abort the possible salpingo-ovaritis, by preventing further spread of infection. In this connection, permit me to refer you to a paper read before the New York State Society on the Treatment of Endometritis.¹

But in the more chronic cases, where the tubes and ovaries are considerably involved, and their component elements thickened and perhaps cystic and filled with serum, blood, or pus, salpingotomy or salpingo-oöphorectomy is our only hope of relief. It is quite a difficult matter to decide at all times whether anything short of an abdominal section can get rid of a mass of tubal inflammation. Occasionally we err by operating too early; but I am satisfied, after having followed the course of several cases through weeks and months of more or less invalidism, and after meeting the difficult and dangerous complications during operation as a result of such delay, that early operation in the vast majority of cases is the rule to guide us. The mortality of coeliotomy is small, but the difficulties associated with an absolutely correct diagnosis are very great. We operate for hydrosalpinx, and find a ruptured tubal pregnancy, an ovarian abscess, a suppurating dermoid, or a large cyst of the broad ligament. However, given a case with a history of a recent inflammation, with fixation of the uterus and a tender and painful mass on one or both sides of the pelvic vault, with some rise of temperature, an expectant and conservative treatment should be given a faithful and conscientious trial. Rest; copious hot vaginal and rectal douches, if grateful and well borne, the inclined

¹ New York Journal of Gynecology and Obstetrics, April, 1894.

decubitus; a poultice to the lower abdomen if there be much pain; and, later, glycerin, tampons, or 15 per cent. ichthyol and glycerin, or 50 per cent. boro-glycerin. Painting the vault of the vagina every second or third day with Churchill's tincture of iodine, or vaginal galvanism, and daily soluble movements from the bowels will often bring about resolution and absorption and a healthy restoration of the organs. Very frequently, in a few weeks, say at the next menstrual period, or in some months later, the active inflammation returns upon the slightest provocation. A slight cold, over-exertion, sexual indulgence, a constipated condition of the bowels, is sufficient; moreover, this inflammation will continue to recur with increasing frequency and severity unless the offending mass is removed by operation.

These recurrent inflammations are the cases where so-called conservative measures are positively dangerous, and where the difficulties and complications of surgery, by reason of delay, have progressive and increasing mortality.

Dysmenorrhœa is a very common symptom of advanced tubal and ovarian disease, and when structural changes can be diagnosticated, early surgery should be invoked for its relief. One is often surprised to see women capable of much physical exercise, enjoying their marital relations, and except for dysmenorrhœa, with menorrhagia and some backache, not being conscious of the existence of a pelvic mass so large and so adherent that it is with very great difficulty removed. On the other hand, a more important class of suffering women exists in whom, upon physical examina-

tion, other than slight thickening of the tubes, little can be felt; and yet their lives are made miserable by reason of constant pain in the groins, shooting down the thighs and extending into the back; irritable bladder, and constipated bowels; reflex disturbances of the heart, stomach, and abdominal viscera. They are the subjects of the chronic atrophic or sclerotic form of salpingo-ovaritis, and are left to be hopeless invalids with nervous systems so shattered and broken down by reason of years of constant irritation and suffering because the physician, upon vaginal examination, does not feel a big mass; and without it, he thinks that operative measures are unnecessary. However, sometimes in this class of cases, I have found the fine faradic coil of signal benefit because pain and its results are what must be relieved and not merely life saved, as in the more desperate cases. Yet, after having given electricity in the form of galvanism and faradization a fair trial, and used all the other means which naturally suggest themselves and failing to give sufficient relief, abdominal section must be recommended. Perhaps there is no class of cases upon whom it is more unsatisfactory to operate than these women, broken down in nervous system after years of constant suffering consequent upon fruitless delay. Nor is it surprising that an operation so often fails to give the expected relief because this condition is now not simply a pachysalpingo-ovaritis, but a neurasthenic hypersensitive woman with a nervous system, giving out irregular and erratic nerve discharges. Unfortunately, it is by the standard of these women that so brilliant a surgical

procedure as salpingotomy is estimated. One of the most important class of cases which must be carefully differentiated are the subjects of the irritable ovary in whom suffering is very great, and upon whom many operations have been needlessly performed. Charcot has demonstrated that this condition exists in the ovary itself. Pain upon vaginal examination is often excruciating, and tenderness upon pressure over the ovarian regions and in the pit of the stomach is agonizing. There is usually very great dysmenorrhœa, nausea, and vomiting, and particularly at the menstrual period, globus hystericus and œsophageal spasm, and often hysterical outbreaks and even hystero-epileptic and hystero-choreic spasms, contractions of muscles, local paralyses, painful stigmata and hystero-genetic zones help to verify the diagnosis. In these cases, I believe the fine faradic coil to be of very great value. The current must be applied through a bipolar vaginal electrode; the pain and tenderness, as if by magic, will often disappear; the stomach irritability ceases; and the menses appear with regularity and without pain. Again I refer you to a paper read before this society, and published in the *Buffalo Medical and Surgical Journal*, on the fine faradic coil, or coil of tension. After the pain and tenderness have disappeared as the immediate result of the vaginal application, a more careful digital examination can be made, when it will be found that there exists no thickening or distortion of the tubes and that the trouble was purely functional.

These conclusions are well borne out by the results in the appended

list of some recent operations performed by me. (See pages 516-518.)

These cases represent a series of very difficult and complicated operations. The disease was advanced, the adhesions dense, and the bowel and omentum attachments very firm. They simply represent what delay produces, and sound in loud and clear notes the necessity for early operations. They also establish beyond doubt that nothing short of surgery could promise any relief. Some mishaps have occurred, such as stitch-hole abscess, the causes of which would be very interesting to study. Where they were met they were least expected. No hernia or other complications or sequelæ have resulted, and the drainage-tube was freely used. Silkworm-gut for closing the abdominal wound and the different layers reinforced with catgut.

Case I died from inexperience on the part of the operator and want of a more perfect technique.

Case IV was abandoned, as it was utterly impossible to remove the mass. The patient's condition was bad, and the adhesions general. Had pus been found, the sac-wall and peritoneum would have been stitched together and drainage and irrigation effected, and, perhaps, counter-drainage through the vagina.

Case IX was abandoned because of cancer. Before operation through a large opening in the bowel, about four inches from the anal orifice, a hard tumor could be felt. This mass was found to be a cancer of the small bowel, not ulcerating, and adherent to and covering over the opening into the rectum. The glands in the neighborhood were considerably involved.

Case III had a stitch-hole abscess

develop at the lower angle of the incision, and, no doubt, this was due to necrosis as a result of the extreme tension consequent upon such a large, thick, fat abdominal wall. It continued to discharge for fourteen days, and then healed kindly. This discharge at first was pus, but later seemed to be made up largely of liquefied fat. The patient weighed 198 pounds. The scar is firm and strong.

Case X I wish to report at length, and append the following history :

Mrs. C., aged 36. Widow. No children. Always regular and no pain. Had three miscarriages, and six years ago Dr. Mann treated successfully with electricity a three months' ectopic gestation of the left tube. Two years ago I treated the patient for a mild attack of salpingitis and ovaritis. She remained in bed for two weeks, and since that time has been very well. I was called to see Mrs. C. on November 20, 1893, when she gave me the following history: She had skipped two periods, and had from time to time inserted a catheter into the uterus to provoke a miscarriage. There was a muco-sanguineous discharge from the uterus, and the organ was found to be enlarged, but freely movable antero-posteriorly. In the left broad ligament a globular swelling was felt, slightly tender, and painful to the touch. Temperature 103° F.; pulse 118. She had had a very bad chill in the early morning. Pain and tenderness upon pressure over the left iliac region. The practical question to decide, Was the woman pregnant? and if so, was the febrile disturbance the result of septic infection from retained secundines, or from a septic endometritis, the result of the intrauterine infection from the prob-

ing? Second, was the swelling in the broad ligament an acute salpingitis, with effusion, or a hæmatoma, an ectopic gestation or a fibroid? The woman was 36 years old, and never had any children.

The cervix was dilated under anæsthesia, and the uterus thoroughly curetted, but no placental products were present; it was then packed with iodoform gauze. The temperature fell at once and remained normal, and was followed by immediate relief of the pain; and in three weeks the patient was up and about. I had ceased my visits, when I was again called, and found that the patient had had a chill, and it was followed by a high temperature, 105° F. The uterus was fixed, and a large mass filled the right side of the pelvis, extending anteriorly and posteriorly, well into the *cul-de-sacs*. There was also fulness and thickening in the left side, but evidently not acute and recent. The temperature remained high for several days, and every alternate day there was a chill followed by fever with profuse sweating. The patient continued very sick for some weeks, and the mass was very extensive, and could be felt well up about the brim of the pelvis. However, the pain gradually disappeared, the temperature fell, and convalescence set in. This attack lasted eleven weeks. She called upon me at my office on February 4, 1894, when I congratulated her upon her condition. The uterus was somewhat movable antero-posteriorly, and the previous mass in the front and back of the uterus had disappeared, and the tubes could be felt thickened and distorted; but there was no special pain and tenderness upon the examination. Ten days from this consulta-

tion she again called, complaining of pain in the back and side; and upon vaginal examination I found the mass in the right side had returned, and the uterus was fixed, painful, and tender. Dr. Mann, who had seen the patient with me several times in consultation, agreed that an operation should be performed at once. On February 19, 1894, after two days' preparation, a section was made. Dr. Mann kindly assisted me. The swelling was found to be bowels, omentum, tube, and ovary in a bed of recent tough lymph and dense adhesions. The various elements were separated with knife and scissors, and the tubes and ovaries delivered and tied off. Each ovary contained an abscess, which broke and discharged foul-smelling pus. A glass drainage-tube was inserted and kept in place twenty-four hours. The drainage was very free at first. On the seventh day, there was a rise of temperature which was followed in two days by a discharge of stinking pus from the lower angle of the abdominal incision. Every stitch had healed kindly, and the wound was beautifully closed. The cause of this fascial abscess is difficult to explain, but I am inclined to believe that it was due to necrosis consequent upon constriction. The fascia was brought together by a continuous catgut suture, and this tension and constriction was naturally increased by the through silk-worm suture, which took into its grasp the whole abdominal wall. The catgut used to bring the fascia into

apposition was specially prepared by me, and specially sterilized in alcohol previous to the operation.

COMMENTS.

At first, the patient, no doubt, had a septic inflammation which was due to infection consequent upon the intra-uterine probing and traumatism. A salpingitis of the left side was the first manifestation of the extension of the inflammation from the endometrium. This, in a measure, subsided; but the infection either passed over from this side through the uterus to the other tube, or the right tube became subsequently involved after the three weeks of apparent security and invulnerability.

Had a section been performed when the uterus was first curetted, there is no assurance that the right tube would not have been infected after the operation, and a second coeliotomy would have been necessary for its removal unless both tubes had been sacrificed at the first operation. The long illness, chills, and fever were, no doubt, due to the pus found at the operation, which may have existed from the very beginning of the sickness.

Finally, I am inclined to believe that an operation should have been done when the second attack occurred, before the adhesions were so dense and so general. But upon this point many surgeons differ, believing that it is better not to operate in these acute cases unless life is in immediate jeopardy.

ABDOMINAL SECTIONS.

No.	DATE.	M. S. W.	CONDITION.	DISEASE.	OPERATION.	PATHOLOGICAL CONDITION.	DRAIN.	COURSE.	RESULT.	REMARKS.
1	Mrs. B., Sept. 9, 1891. Age 29 years.	W. No children.	Good.	Double ovarian tumor.	Ovariectomy, "double."	Tumors size of fetal head at birth, and covering uterus like a cocked hat. Free adhesions, but friable. Tubes very much thickened, size of finger; and ovaries cystic, size of orange. Dense adhesions.	Rubber tube	Septic peritonitis ensuing immediately, and death on the fifth day. Uninterrupted	D.	Physical condition excellent, but sexual appetite much lessened.
2	Miss D., June 8, 1893. Age 36 years.	S. Three miscarriages.	Fair.	Double pyosalpingitis. Cystic ovaries. Peritonitis.	Salpingo-oöphorectomy, "double."	Tubes very much thickened, size of finger; and ovaries cystic, size of orange. Dense adhesions.	Glass tube nineteen hours. Free drainage for first six hours. None.	Uninterrupted	R.	Condition very much improved. No dyspareunia and free from pain, but suffers from menopausal symptoms.
3	Mrs. K., June 25, 1893. Age 43 years	M. Five children. No miscarriages.	Good.	Prolapsed adherent ovary of left side. Slight salpingitis of left tube.	Salpingo-oöphorectomy. Left side.	Ovary size of small egg. Cystic, the center in Douglas's cavity. Tube thickened and enlarged.	None.	Stitch-hole abscess. Woman was very fat, and weighed 190 pounds.	R.	Lived seven months, and considerable improvement in state of swelling for first six weeks, then suffered with high fever and chills. Abscess pointed in abdominal wall on the left iliac fossa. Incision and drainage three months after first operation.
4	Mrs. S., Oct 9, 1893. Age 28 years.	M. One child, 8 years.	Bad.	Pelvic mass filling both sides and extending to near the uterus. Indurated left side. Probably pyosalpingitis, with pus in pelvis or little foci scattered here and there.	Exploratory incision. Punctured a number of places with a large needle, but could get no pus.	Omentum, bowels, and pelvic tumor one solid mass.	None.	Uninterrupted	R.	Condition very much improved. No dyspareunia and free from pain, but suffers from menopausal symptoms.
5	Mrs. L., Oct. 23, 1893. Age 28 years.	Married six years. No children.	Fair.	Ruptured tubal pregnancy. Ectopic, seven weeks. Ovary and placenta found. Pyosalpingitis of right side, with fibrine closed and adherent to ovary.	Salpingo-oöphorectomy, "double."	A large slightly-adherent mass in left side, posteriorly, and be stratified clots, in the centre of which was found an ovum the size of a shrimp with placenta and cord attachment.	Glass tube nineteen hours. Free discharge six hours.	Uninterrupted	R.	Condition excellent. Sexual appetite unimpaired.

ABDOMINAL SECTIONS.—Continued.

No.	DATE.	M. S. W.	CONDITION.	DISEASE.	OPERATION.	PATHOLOGICAL CONDITION.	DRAIN.	COURSE.	RESULT.	REMARKS.
6	Mrs. B. Oct. 28, 1891. 30 years.	M. No children.	Good	Double cystic pyosalpingo-oophoritis. Peritonitis.	Salpingo-oophorectomy, "double."	Tubes very thick. Ovaries cystic, size of orange. Adhesions very dense, and firmly attached to bowels and omentum.	Glass tube thirty hours Very free drainage for first six hours	Uninterrupted	R.	In very best of health and spirits. Sexual appetite unimpaired.
7	Mrs. D. Jan. 24, 1894. 39 years.	M. No children.	Good.	Double cystic pyosalpingo-oophoritis. Peritonitis.	Salpingo-oophorectomy. Appendectomy.	Right tube and ovary enclosed in a dense mass of adhesions, consisting of bowels, omentum, and appendix. Left not so large nor so firmly adherent.	Glass tube for sixteen hours. At first very free flow.	Uninterrupted until third week, when a small stitch-bolt was used to secure drainage.	R.	Condition excellent. Sexual appetite unimpaired
8	Mrs. C. Feb. 12, 1894. 52 years.	M. Three children.	Good.	Complete pro-cidentia.	In July 1 performed curettage and circular amputation of cervix. anterior colporrhaphy, taking out a very large section of vaginal wall. Tait perineorrhaphy. Feb. 12, 1894. In abdominal incision, passed three silk-worm sutures through anterior wall of uterus, also taking in peritoncum muscle, and fascia. Exploratory incision.		None.	Had bronchitis and catarrhal pneumonia for fourteen days.	R.	Condition excellent. Uterus held up in place and no pain.
9	Mrs. R., Feb. 18, 1894. Age 35 years.	M. Two children.	Fair.	Cancer of small bowel, with glandular involvement. A mass was felt through the sinus opening in rectum.		A mass the size of an orange with glands involved, and found to be adherent to the opening in rectum.	None.	Uninterrupted	R.	Condition unimproved.

ABDOMINAL SECTIONS.—Concluded.

NO.	DATE.	W. S. W.	CONDITION.	DISEASE.	OPERATION.	PATHOLOGICAL CONDITION.	DRAIN.	COURSE.	RESULT.	REMARKS.
10	Mrs. C., Feb. 18, 1894. Age 30 years.	W. No children.	Good.	Double pyosalpingitis. Ovarian abscess of both sides. Peritonitis.	Salpingo-oöphorectomy. Bowels were sutured in several places. The peritoneum and even the bowel wall was torn.	A very large mass on right side, made up of dense recent adhesions, and tough bands adherent to bowels and omentum. Mass on left side smaller. Adhesions so dense as to require knife and scissors.	Glass for eighteen hours. Very free.	A very bad fascial abscess occurred on eighth day, and discharged foul-smelling pus copiously. Wound had united kindly and scar very clean when there was a rise of temperature and discharge of pus.	R.	Condition excellent. For first three days after operation the alvine discharges contained a great deal of mucus, and streaked with blood. Condition at present excellent.
11	Mrs. V., Feb. 23, 1894. Age 52 years.	W. Five children	Fair.	Complete procidentiauteri.	On Feb 2, anterior colporrhaphy, a taking out a large section of anterior vaginal wall. Feb. 23, 1894, hysteror-rhaphy; four silk worm sutures through anterior wall of uterus, and taking up peritoneum, muscle and fascia in its bite.	None.	Uninterrupted	R.	Condition excellent. Uterus held in position and no pain.	

The Pathology of Pelvic Inflammations in Women.¹

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CLINICALLY, pelvic inflammations, their complications, and residues comprise, according to Winckel, 33 per cent. of the cases that come to the attention of the gynecologist, and yet one referring to the text-books and journals of to-day will find that some of the essential principles of pathology and treatment pertaining thereto remain at the present time under consideration and not fully established. The importance of this subject has prompted the writing of this paper.

It is not necessary to review the anatomy, physiology, and histology of the female pelvic viscera with minute precision. I shall yet endeavor to make the thoughts presented as clear and consecutive as is possible in the time that I feel warranted in appropriating. The relations of the pelvic organs to each other and their abundant vascular and nerve-supply are well known to every one, and are simply referred to for the purpose of reminding you of one of the reasons—a very important one—why these inflammations prevail with such astonishing frequency. This intricate and labyrinthine arrangement of tissue, vessel, and nerve has its wise purposes to fulfil in health, and its weaknesses that become manifest in disease. It permits the highest state of nutrition so necessary to the healthful performance of the various functions imposed on these organs, and it is also a source of innutrition when once these vessels

and nerves become irritated and obstructed by the various morbid processes that provoke and maintain blood-stasis.

Emmet was one of the first to call attention to the importance of a knowledge of pelvic disease, and when he first advanced his doctrine of pelvic cellulitis, it was seized upon by a large number of gynecologists as the most rational pathology that had yet been made known. It was a very plausible and seductive theory that the avenue of approach of all inflammations in this region was the pelvic connective tissue, and that from this tissue they spread, if unarrested, into the other organs that it surrounded, overlapped, or interlaced. Hence, pelvic cellulitis was the great primary cause of all the sexual woes of woman, and to arrest or subdue it was the gynecologist's duty.

With a strange tenacity, Emmet still clings to the main features of his early pathology, though admitting that there are a few exceptional cases where the order is reversed, the invasion beginning in the tubes or ovaries, and extending thence to the areolar tissue.

In 1843, Bennet asserted that to inflammation of the cervical canal was due the greater part of the sexual woes of woman, and it was accepted with an almost universal belief. Bennet asserted with much zeal that from cervicitis came ulceration, displacements, leucorrhœa, menstrual derangements, even ovarian disorders, and that by the application of strong caus-

¹ Read before the Gynecological Society of Boston.

tics to the offending os and cervix, all these could be cured. This was the beginning of the caustic treatment, which did much harm until checked in its career by Sims and Emmet.

Sims, the surgeon, addressed himself to repairing the damage caustics had done, by invoking surgical means to accomplish the end sought. He would rend with the knife the stenotic wombs the silver stick had caused.

Emmet, the physician, sought the same end by gentler agencies,—those of cleanliness, heat, soothing applications, and the hygienic and nutritive aids of rest and food.

Emmet stoutly denied that ulceration (so-called), erosions, and other manifestations that Bennet attributed to inflammation of the cervix, existed at all *per se*, and so affirmed that these numerous visible changes were due to arrested or impaired nutrition, with only one possible exception,—viz., when consecutive to cervical laceration. To this latter he also attributed the so called pelvic cellulitis in a considerable proportion of cases. Hence, when erosions did not disappear under milder means, he would freshen the torn surfaces, cutting away all the proliferations, and unite them with sutures,—the operation to which the name trachelorrhaphy has become attached. Emmet seems to be as unwilling to accept the views of Tait, Hegar, Price, McMurtry, Wylie, and their followers, as he would be to return to the obsolete doctrine of Bennet.

For a better understanding of the true pathological intrapelvic state, whose manifestations we call inflammation, we are indebted to operative surgery, which has dared to open up

the peritoneal cavity to daily exploration. This has demonstrated the relation of diseased tubes and ovaries as well as puerperal, specific, and traumatic infections to pelvic inflammations. It has led to the recasting of opinions in regard to the origin of these inflammations, as well as to the morbid changes that are taking place within the pelvic cavity during their various stages of progress.

The first result of inflammation of the cellular tissue is a sero-fibrinous exudation from the blood-vessels. The tissue is then infiltrated by young cells which arise from proliferation of the connective-tissue corpuscles. Their ranks are rapidly swollen by the emigration of white blood-corpuscles from the capillaries. As a result of pressure from this exudation and the crowding of young cells, complete stasis of blood occurs in the capillaries; necrosis of the intercellular substance takes place; liquefaction follows, and suppuration is the result. If the inflammatory process stops short of the formation of pus, resolution occurs, and the result is the production of a fibrous material whose characteristic property is contractility. This is cicatricial tissue. Cicatricial tissue in one of the broad ligaments causes a lateral version of the uterus; in the utero-sacral ligaments, traction upward and backward of the cervix, which gives rise to pathological anti-flexion with its consequences, dysmenorrhœa and sterility. The feeling is fast laying hold of the men who are at constant work in this department of medicine that these inflammations generally take origin in some disturbance of the ovary or Fallopian tube and extend into the contiguous structures as the inflammation pro-

gress; or, if the cause be puerperal, the nidus resides in the uterus itself, and so travels up and down and in all directions according to its severity, or the resistance it meets.

A pelvic inflammation may be so slight in a few instances as to give little discomfort, and it may pass to recovery without treatment. A severer form occasions subserous congestion, transudation of serum, and exudation of plastic lymph. In still more severe cases, serum is poured into Douglas's pouch, much as it is into the pleura during the course of pleurisy with effusion. Lastly, we may have suppuration—the so-called pelvic abscess—which demands prompt surgical treatment.

The residues which these acute inflammations leave behind, their sequelæ depend upon the severity and extent of the invasion. The slighter forms may leave equally slight traces, or none that constitute a disability,—in other words, the resolution is complete. But in the higher grades of inflammation, where the products are deposited over a great extent of surface over uterus, tubes, ovaries, and ligaments, these organs become matted together in a greater or less degree, and become entangled and bound down by strong adhesive bands, just as we observe happens in the pleural cavity. These adhesions contract and grow firmer with time; the ovaries, imprisoned in their relentless grasp, become sensitive, painful, and swollen, or degenerate or become atrophied under their influence. Each recurring menstruation seems only to increase this woful condition, until, finally, pyosalpinx or even abscess of the ovary results from the retained secretions and pent-

up fluids, or secondary pus-sacs may form outside these organs in the connective tissue, constituting what has been described as true pelvic abscess. It would be difficult in such a case, unless familiar with it from the outset, to fix the precise starting-point of the inflammatory process, but at this stage, and in such a case, there remains little to do, except to open the abdomen, remove the pus, whether in ovary, tube, or sac, and break up the adhesions as much as possible.

In a woman who must earn her bread in the sweat of her brow, there should be little delay in resorting to surgical interference. Such can ill afford to spend much time with expectant methods. The argument against unsexing a woman by removal of her organs has small weight here, for the disease itself has already destroyed her procreative power, or else made pregnancy a dangerous complication to happen.

This simple grouping of the essential features of pelvic inflammation, imperfect and unsatisfactory though it may be as a pathological picture, is, nevertheless, a faithful setting forth of the salients of the disease as far as now understood.

This paper might be prolonged, but as I am reading to a learned audience, elementary details have been omitted.

It will be observed by an examination of the modern literature of this subject that the terms *perimetritis* and *parametritis* are gradually disappearing. No little confusion has resulted from the use of these terms, and it is therefore well that they should be dropped. And so, too, with cellular abscess, for it may be questioned whether there is any such condition, the pus-sac being really the

diseased tubes and ovaries, or secondary to such conditions. After adhesions are formed, pus may burrow in many directions, usually following the route of least resistance. It may traverse the cellular tissue planes, but the original seat of the abscess is within the peritoneum and in the tubes or ovaries. I have seen a pus-degenerated ovary when taken out of the abdomen leaking pus *gutta-tim*, so to speak, from the site of the pavilion, which at intervals, through this leakage, caused by overflow or contractions, had set up recurrent inflammation until the surrounding peritoneum had no rest,—only recovering from one attack to find another about to be precipitated.

Perhaps I cannot interest you more than to quote what Mr. Tait says in his latest work about cellulitis and perimetritis and parametritis. These are his words:

“In the employment of the terms perimetritis and parametritis, as introduced by Virchow and advocated by Mathews Duncan, we have introduced a wholesale confusion into gynecology which will take many years yet of industrious work to get right. This confusion has been vastly aided by Dr. Emmet’s teachings about cellulitis. If parametritis and cellulitis be relegated to their proper place,—and they may be taken to mean the same thing,—it is one of the rare conditions we have to deal with among the special ailments of women.

“By perimetritis we mean an inflammatory action of the peritoneal investment of the uterus, so that the products of the diseased action are found chiefly, or it may be entirely, within the serous cavity.

“By parametritis we mean inflam-

mation of the cellular tissue in the neighborhood of the uterus, the result of the process being mainly found outside the peritoneum.”

Perimetritis is a much more fatal disease than parametritis, and occurs with greater frequency in association with two particular conditions. These are parturition, either at full time or prematurely, and gonorrhœal infections. By far the greater number of cases of perimetritis, or pelvic peritonitis, are the result of some traumatism of parturient women, and most of them, therefore, come under the care of the obstetric physician.

“Puerperal and other forms of septic perimetritis are very fatal, for it rapidly becomes general peritonitis. In recent years I have proposed in such cases to open and clean out the peritoneal cavity, and I have followed out this plan in five cases, of which two have been successful. Before the light came which is shed upon these ailments by modern abdominal surgery, I believed as others did, and do still, that parametritis, or pelvic cellulitis, was a common disease, and in my writings up to 1878 it is evident I confused cases of damaged uterine appendages with pelvic cellulitis. The latter disease is rare, and occurs in two forms depending for their characters on the situation of the disease. If it is situated in the inner half of the broad ligament, it is to be recognized as a mass lying close to the uterus and in front of it, between the uterus and bladder, and into the bladder it generally bursts. If it exists in the outer half of the broad ligament it is to be recognized as an ill-defined mass lying on the brim of the pelvis, and fading off on that ridge. In this position it

bursts over the brim of the pelvis and constitutes the familiar 'pelvic abscess,' whose sinuses go on for years. . . . I treat all such cases, as I shall afterwards tell, by abdominal section and drainage, and the patients are cured in as many days as it takes them months to get well if treated in any other way."

Though somewhat lengthy, this excerpt could not well be shortened without doing imperfect justice to the author's views. It is interesting as giving the matured opinions of a man who is never dull in expression or dry in thought, and who has an experience of more than 2000 abdominal sections made with his own hands, from which to enrich literature and fortify his opinion. Moreover, his educated finger-tips seldom fail him in diagnosis, but when in doubt and the patient is in extreme danger, or great suffering, he does not hesitate to open the abdomen to ascertain the cause,—relying upon his marvelous skill, great dexterity, and scrupulous care to cure his patient; and these seldom fail.

Mr. Tait's views are in striking line with those foreshadowed by Bernutz and Goupil thirty years ago. After challenging the correctness of M. Nonat's pathology of what he called peri-uterine phlegmon, Bernutz goes on to say: "These researches, then, have led to the conclusion that inflammation of the pelvic peritoneum, which is the cause of the visceral adhesion, is a disease that is very commonly met with. . . . Lastly, I conclude that inflammation of the pelvic serous membrane is symptomatic, and that it is generally symptomatic of inflammation of the ovaries or Fallopian tubes. Thus,

great interest is attached to the study of this affection, and it is very important to understand thoroughly the symptoms, in order to describe satisfactorily the uterine and more especially the tubo-ovarian disease which occasions it. . . . It follows from all this that, unless we take fatal cases to enable us to determine anatomically where the pelvic inflammation began, we cannot positively state whether it came from inflammation of the ovary or of the Fallopian tube, nor whether it was caused by the puerperal state, by blennorrhagia, scrofula, or any other malady. Thus, we can only lay hold, as it were, of the two ends of the pathological problem, the primary disease and the serous inflammation,—the intermediate gap we can only fill after death."

Only now the intermediate gap has been filled during the lifetime of the patient, thanks to the aseptic surgery of the present. How singular that this almost perfect pathology should slumber in lethal repose so long. Strange that the masters of a quarter of a century should have overlooked it so completely. The "intermediate gap" has now been supplied by the courage and skill of a few men who have dared to say that they did not know, and then opened the abdomen to see what it contained.

Dr. Bumm has also made some important observations with the view of determining the true cause of so-called cellulitis. Where pus is present he thinks it much easier to decide as to its cause than in a case of simple serous exudation. Cellulitis, he says, is usually divided into the infectious and traumatic varieties, but he punctured a supposed traumatic exudation in five cases, two of which he found to be of gonorrhœal origin, while the

fluid of the other three contained streptococci. His conclusions from experiments on animals are that wherever streptococci are present, there must be infection from without; that they are never found in the healthy genital secretions; that auto-infection is extremely improbable, and that the legitimate inference from his studies is that there is no purely traumatic cellulitis; that, where pelvic cellular inflammation arises, it is directly attributed to the operator, and not to the operation,—to infection, and not to traumatism.

But I detain you too long; there is so much of interest connected with this subject that one finds it difficult to pause. It is possible that the studies of Bumm may lead to a further modification of the present classification of causes of pelvic inflammations. Meanwhile, the following, formulated by McMurtry, may be named as about the best grouping of cases I have seen:

(1) Inflammation of serous and cellular intrapelvic tissues cannot be separated clinically nor histologically, hence they cannot be properly distinguished by the terms parametritis and perimetritis.

(2) The pelvic cellulitis of Emmet, which corresponds to the peri-uterine phlegmon of Nonat, is as rare as inflammation of the cellular tissue elsewhere.

(3) Pelvic inflammation is, generally speaking, peritonitis resulting from disease of the ovaries or Fallopian tubes, or both.

(4) Pelvic peritonitis presents every grade of activity, and is always symptomatic, never idiopathic.

We may name three general groups of these inflammations:

(a) Those of puerperal origin.

(b) Those of gonorrhœal origin.

(c) Those caused by infections carried to the endometrium by unclean instruments, tents, or medicinal agents, or those arising from traumatism.

The Treatment of Fibromyoma of the Uterus.¹

BY AUGUSTUS P. CLARKE, A.M., M.D.,

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IN devising a method for successful treatment of fibroid tumors of the uterus there are many points that should be taken into consideration. If the tumor is large, or has reached the stage in which its growth is becoming rapid, and the consequent hæmorrhage is excessive, removal of the ovaries

may afford the necessary relief. This line of procedure will be more especially indicated in those cases in which its situation is such that the administration of the usual remedial agents fails to effect any immediate influence over the hæmorrhagic tendency. Hæmorrhage, though a troublesome symptom, can often be kept under control. Curetting the cavity of the

¹ Read before the Gynæcological Society of Boston, April 12, 1894.

uterus at certain intervals will often prove of advantage. Apostoli's method by galvanism or electrolysis will yield the best results in the interstitial variety. This class of tumors is more largely composed than the others of the muscular element; their seat and development in the parenchyma or the corporeal structure of the uterus are usually favorable to the investment of this tissue. In the treatment of such cases galvanism may be employed with advantage on account of the contractions it induces in the fibrils of the muscular tissue. The subserous or subperitoneal fibroid is also composed largely of involuntary muscular fibre which contains spindle-shaped and muscular cells. Tumors of this variety, when assuming rapid growth, may be arrested or kept under control by properly-conducted applications of the galvanic current. The contracting influence of this current has undoubtedly had in many cases a favorable effect in causing a diminution of the tumor or a retrogression of its growth. Tumors of the slower growth occurring in these localities are for the most part composed of connective tissue with fusiform fibre-cells having round or elliptical granules and interlaced with a fine and delicate intercellular stroma. The employment of electrolysis for the arrest of such growths may for a while be attended with seeming benefit, but it cannot long be continued without incurring the risk of exciting serious inflammation in the parametric tissue, or of superinducing or hastening a malignant degeneration. As said before, hæmorrhage may be controlled by curettement of the endometrium, especially when it has become hypertrophied, and it may

still be further relieved by the application of the tincture of iodine. The employment of ergot may also be tried, though the result to be achieved by its use will not be as great as when used in those cases in which the growth is essentially of a myomatous formation. The advantage that follows the use of electricity is that it will often control hæmorrhage and will generally relieve pain. Apostoli uses the current with high intensities,—that is, from 200 to 250 millampères, whereas M. Danion regards, as he stated at the Tenth International Medical Congress, such high intensities as positively harmful, and even dangerous to life. Monsieur A. Gontaroff, of Moscow, attributes his success to the employment of still higher intensities; he stated that he had used intensities as high as 800 to 1000 millampères. That I may not misrepresent him here, I quote his own words:

“On pratique les galvano-punctures à doses moyennes (150 M.-A.) trois fois par semaine, à plus hautes doses (800-1000 M.-A.) tous les huit jours.” M. Gontaroff did not, however, say that he restricted the use of these high currents to the treatment of fibroids, though that conclusion was inferred by members of the congress. The same distinguished author says that galvano-cauterization is principally indicated in cases of interstitial and submucous fibromyomata. In subserous and intraligamentous fibroids galvano-puncture should be had recourse to. It is only in the cases of fibroids which are not degenerated and non-multiple that electricity yields the best results. In such cases complete dissipation of the tumor can be effected. Gontaroff considers the

employment of high intensities as a safe proceeding, and says that the administration of chloroform when the high doses are used is not always indispensable. These seemingly conflicting statements enable us to appreciate Cutter's original method when he punctured the growth through the abdominal wall, and applied the current without an instrument to mark the number of milliamperes employed. If such high intensities can be employed with safety, there appears to be no special need of a galvanometer. According to that theory all that would seem to be necessary is to put on a current strong enough to dissipate the tumor (if such dissipation can be effected). The truth about the whole matter as regards the treatment of fibroids by electricity is becoming more and more apparent that but little advance has been made over the method as first employed by Cutter, and that the profession is still in waiting for a mode of procedure that shall insure more effectual results. As already stated, it is only the interstitial growth, or the one composed essentially of the muscular element, that can be reduced or dissipated by the contracting influence of galvanization. It was formerly held that the nearer the menopause the less would the presence of a fibroid necessitate operative procedures. It is true that in cases of fibroids the chief symptom for which the medical attendant is consulted is for the occurrence of hæmorrhage, and that after the menopause the dangers of hæmorrhage are seemingly lessened. The growth may at, if not before, that period take on a retrograde action or a calcareous degeneration.

Cases having taken on such condi-

tion have from time to time been reported. In my own practice I have had cases of fibroids whose growth and development had been under my observation for many years. In a number of instances the tumor underwent retrogression. In some of the cases marked, calcareous degeneration took place. Apart from such fortunate results which now and then occur, there is another phase of the subject to be considered. I can now recall a number of cases of fibroids that took on malignant degeneration evidently from repeated and continued irritation. The matter of a fibroid assuming a malignant condition is an important subject for consideration, and should not be lost sight of.

Dr. Irish, in a recent discussion which took place before this society, emphasized the importance of this point. Undoubtedly a large proportion of fibroids, as observed by physicians, present no symptoms demanding the employment of any radical surgical measures. Many patients suffering from uterine myoma disappear after a while from the care of the medical attendant, and if not, their lives may be cut short by accident or intercurrent disease.

Since the discussion, which took place at the International Meeting at Washington in 1887 and at Berlin in 1890, on the treatment of fibroids, the attention of the profession has been more generally directed to the consideration of the subject. Many views or opinions that were held as authoritative or as expressive of confidence in the development of a more certain and exact method of procedure by the employment of galvanism or electrolysis for the cure of uterine myoma have been found to be largely dis-

appointing, and thus demanding important modification. Treatment by surgical measures is fast coming to be recognized in a larger percentage of cases as essentially necessary. The method by enucleation of myomata as devised by A. Martin, of Berlin, and adopted and followed and modified by Fritsch, Hegar, and others, of the German school, offers an important means of relief for certain cases of subperitoneal and interstitial fibroids. The operation can best be accomplished by *cœliotomy*. By this operation Martin has removed the tumor from the gravid uterus without interrupting pregnancy. In this operation the capsule of the tumor is incised, and the growth is removed and the sac closed by deep sutures. Drainage into the vagina as a precautionary measure is sometimes employed. As surgical procedures are coming more and more to be employed, much judgment and discrimination must be exercised lest patients having fibroids be exposed to unnecessary dangers by submitting to operative measures not clearly demanded. The method of treatment adopted by Dr. Franklin Martin, of Chicago, of tying the uterine arteries through the vagina gives promise of insuring much success in some cases. This operation would seem to be indicated in those cases in which the growth has not assumed large proportions. The effect of the operation must sometimes be similar to that obtained by the method carried out by Hegar. The chief objection to this procedure arises from the danger of the occurrence of extensive sloughing from the immediate withdrawing of the arterial current to the growth from the uterine tissues and neighboring parts. Those who have

observed and studied the results of vaginal hysterectomy, as performed by A. Martin, of Berlin, for certain diseases of the uterine system, cannot but regard the method as one best adapted for those cases of myoma in which the hæmorrhage cannot be essentially overcome by curettement. In cases of interstitial fibroids attended with uncontrollable hæmorrhage, the removal of the appendages, as already remarked, may be of material benefit. The adoption of this method does not produce as favorable results as are obtained by the resort to vaginal hysterectomy. A uterus shorn of its adnexa can be of no possible use to its possessor, but is liable to become displaced or to undergo malignant degeneration. An operation for the removal of a fibroid, either by vaginal or by supravaginal hysterectomy, should not be undertaken for a mere inconvenience or for an unsightly appearance. Hæmorrhage is often the leading symptom which the medical attendant is called upon to relieve. In some cases the presence of a large fibroid may cause deterioration of the patient's health. This may be superinduced by the pressure upon the surrounding tissues, or upon the uterine appendages, or upon one or both ureters or other parts, and be the cause of severe suffering.

In such cases there may occur a cellulitis, a salpingitis, or a peritonitis, and also a pelvic suppuration. To prevent or overcome these conditions, an operation for the removal of the growth will have to be undertaken. This may be effected either in connection with the uterus alone or with the appendages. A myoma located in the lower segment of the uterus, and causing more or less dilatation of

the cervical canal, should, of course, be removed through the vagina. In those cases in which the growth is situated in the corporeal or fundal portion of the uterus, and projecting somewhat into or towards the cavity, the administration of oxytocics may, by their compressing influence, be of decided advantage. The removal of the growth may subsequently be accomplished *en morcellement*.

In no instance occurring in cases of

this nature should electricity be employed, for later experiences show that the benefits to be derived by its use can best be had in those cases in which the tumor was originally interstitial, and from its position was made up of the muscular element, or was of a subserous or subperitoneal type, and had on account of the presence of an undue proportion of the muscular tissue taken on a rapid growth.

EDITORIAL.

The Congress of American Physicians and Surgeons.

THE third triennial gathering of this body of eminent specialists was held in the last days of May and was in every respect a great success. Fourteen different National Special Societies held their regular annual meetings in Washington at the same time and each transacted its own affairs in its own way, but instead of holding afternoon sessions of the special societies there were general meetings of the federated societies in the afternoons. Each of these afternoon sessions was under the auspices of two of the special societies selected in alphabetical order, and the problem presented, which was by no means easy of solution, was for each special society to find some subject for discussion which would be attractive and interesting to the members of other societies whose lives are devoted to the study and pursuit of totally different branches of medical science. It was felt by all that

this was a matter of very serious importance, for the very *raison d'être* and justification of the Congress is the drawing together and union of different specialists to consider and discuss subjects which are of interest to all medical men, thus merging the specialist in the physician. On the whole the general meetings were a success, and although some of the younger and more giddy members of the societies were seen playing truant and speeding away on bicycles at the times of the general sessions, yet due allowances must be made for human nature and the seductions of the asphalted avenues in the national capital. In fact, some of the older and more distinguished members of the congress could be heard confiding to each other regrets for the time which could never return when they had less science in their heads and more energy in their legs.

After all, the main charm and in-

terest in such gatherings is not, and never can be, entirely scientific. A large part of it is social, and consists of the reunion of old friends, in the meeting of persons already known by reputation, and in the general stimulus afforded by the intercourse of well-trained intellects devoted to the same branches of knowledge. While such a congress, therefore, should not degenerate into a picnic, neither should it be sublimated into a transcendental bore, and in striking the happy medium this congress was decidedly successful. The season of the year was particularly propitious, for it was neither hot nor cold, and the long days gave abundant opportunity for outdoor excursions and drives without interfering with the times of the sessions. There was also among the members a notable absence of sickness, attributable to the climate or water, which had been so conspicuous at other meetings held in Washington in September.

The two chief functions of a social nature were the great dinner at the Arlington Hotel and the reception at the White House.

In the great hall, adorned with the profusion of flowers and blossoming shrubs for which Washington is so justly celebrated, was gathered a distinguished company, representing all branches in the medical profession. Among many good speeches, the most notable was that of Professor Pepper, who reviewed briefly the causes which led to the organization of the Congress of American Physicians and Surgeons, the success which had fol-

lowed its organization, and the ends which it was expected to promote. He showed not only the advantages which would be derived by the individual members in broadening of their characters and widening of their sympathies by learning to work together with other men interested in different specialties, but all members of one profession; he dwelt, moreover, on the public advantages which would ensue from the united action of the profession, and in his happiest vein drew a sketch, which we hope may prove a prophecy and not an iridescent dream, of the time when the united profession would speak with no uncertain voice in the name of science, when intelligent and honest legislators would be willing to hear and ready to adopt the advice of the profession on matters pertaining to the health of the people, and when long-suffering humanity would be immeasurably benefited by wise laws governing sanitation, quarantine, food-supply, etc., and by the vast reduction of preventable diseases, both endemic and contagious, which is sure to follow the energetic enforcement of wise laws in the good time coming; to all of which we heartily say, Amen.

The reception at the White House, which was given by the President and Mrs. Cleveland to the members of the Congress and their ladies, was a most enjoyable affair, and one which will be long remembered with pleasure by those who participated in the hospitality of the Chief Executive of the nation and of the lovely and stately lady who presides over his household.

Meeting of the American Gynæcological Society.

THE meeting of the American Gynæcological Society was a very full and interesting one. The programme, which was given in our last number, was duly carried out. The main questions under discussion in the meetings of the Society were the same as those which had just been considered by the International Congress at Rome,—viz., the treatment of uterine fibroids, and symphyseotomy. There were, however, several new lines of thought developed, one advocating the radical surgical treat-

ment of inflammatory diseases of the appendages by combining their removal with ablation of the uterus, another advocating conservative operations limiting the removal of tissue to such organs or such parts of organs as are visibly and irretrievably diseased. An important paper on "Diseases of the Ureter" opened up an entirely new field for investigation and discussion, and threw light on many obscure points in pelvic pathology. A full summary of the transactions of the Society will appear in our next issue.

Castration in Nervous Diseases.¹

BY JOSEPH PRICE, M.D.,
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T. SPENCER WELLS: "The principle upon which the operation rests was first clearly stated by Hegar. He hoped by castration to bring about a suppression of the ovarian function, a cessation of the periodical and intermittent influence of the ovaries on the whole system, and an early declaration of the menopause. But a large proportion of the early operations failed in fidelity to the principle upon which all rests, and imperfect castration, the unilateral operation was the rule. In the years 1873-75 many surgeons operated on patients with ovarian neuralgia and general nervous symptoms, or with some congenital imperfections interfering with menstruation.

"Then, in 1876, Trenholme did as Hegar and Tait had done before, and used the operation for hæmorrhage,

depending upon uterine fibroids. Later on operators found all sorts of pretexts for operating. Too many of these operations were imperfect.

"In 1881, Battey, deploring the abuse of his operation, when at the International Congress held in London, felt himself constrained to renew his protest, and record the fact that up to that date he had met with only fifteen cases in which he could see reason for carrying out the practice.

"In Germany the amount and success of oöphorectomy in uterine cases have been very important. The idea pointed out by Hegar has been closely adhered to, and the legitimate use of the operation has been found in fibroids that could not be otherwise treated.

"The operation was not at first well received in England. But now the ovaries and all their appendages go the same way, and the meshes of the

¹ Abstract of the opinions of Wells, Hegar, Battey, and others.

physical, mental, and moral network of reasons why the operation should be done are so closely woven that few cases of a perplexing nature, that can anyhow be connected with the generative organs or functions, have a chance of escaping laparotomy or something more.

"The results of myomotomy are deplorable even now. And the operation, when not fatal, has often been incomplete. Castration, however, presents us with a striking contrast in the mortality, the diminution of tumors, the stoppage of the hæmorrhages, and the disappearance of many of the accompanying symptoms. Moreover, as half the mortality has been due to septicæmia, there is a wide field for surgical enterprise.

"The operation has been performed successfully in obstruction to the menstrual functions acquired in severe labors, by accidents, by gynæcological attempts at surgery, or occasioned by pelvic distortions, flexions, and displacements of the uterus. Such cases are, after all, not very common, and oöphorectomy, as a means of getting rid of the difficulty, is less dangerous and more certain than any other operations done to relieve or gratify the patients.

"The experience of a single case shows how this subject of operation for nervous dysmenorrhœa is surrounded with difficulties both of diagnosis and prognosis. Two castrations had done no good. But the liberation of abnormal connections near the seat of pain did what was wanted. When one recollects the unaccountable spontaneous cures, and how often it has happened that a threatened, simulated, or imperfect operation has been enough to frighten or charm away all

acquaintance with suffering, doubt falls upon both the asserted necessity and the reputed success of the operation itself. It can never be determined how much is due to the amputation, how much is a psychical phenomenon. Still, we do not pretend to say cases of nervous dysmenorrhœa, with neuralgic hysterical symptoms, are not occasionally met with for which there is no other alternative than operation or endurance.

"As for madness, gynæcologists will never empty the lunatic asylums."

The following are the conclusions that may be drawn from the facts at command :

"That the operation of oöphorectomy, or the removal of normal ovaries, is one which may be advised in some cases of uterine fibroids, and in uncontrollable uterine hæmorrhages.

"That it is to be resorted to in certain malformations of the genital organs, deformities of the pelvis, and accidental obstructions of the vagina.

"That the right to use it is very limited in cases of ovarian dysmenorrhœa or neuralgia, and only when they have resisted all treatment, and life or reason is endangered.

"That in nearly all cases of nervous excitement and madness it is inadmissible.

"That it should never be done without the consent of a sane patient, to whom its consequences have been explained.

"That the excision of morbid ovaries and appendages should be distinguished from oöphorectomy, and ought not to be done without the authority of consultation, as in most cases of abdominal section.

"That in nymphomania and mental

diseases it is, to say the least, unjustifiable."

ALFRED HEGAR: "Diseases of the ovaries and tubes, small cystomata, dermoid cysts, fibromata, follicular cystic degenerations, tubo-ovarian tumors, pyosalpinx, and others, may determine very considerable troubles and suffering, and among these, also, serious nervous derangements. The extirpation of such structures stands on the same footing as the removal of any other part of the body which has become useless and degenerate. Nervous symptoms are induced very commonly in uterine derangements in a direct or indirect manner. The question of performing castration may arise in these cases as soon as a psychosis or highly-developed neurosis is kept up by those affections, even when other consequences of them do not require the operation.

"Castration further has not only been proposed, but also performed in cases where no demonstrable disease or anomaly of the sexual organs existed, but only a group of symptoms of nervous nature, such as is often observed in disorders of the genital organs.

"Many gynæcologists went now still further, and completely gave up looking not only for any pathological alteration of the sexual organs, but even for any connection of the neurosis or psychosis with the sexual functions. The opponents won an easy victory in their opposition to an operation never free from danger, and which has to be executed in a disease standing in no causative connection with the genital apparatus.

"An operative proceeding under such circumstances is not to be justified; the probability that after the removal of the germ-glands nutrition

will improve, and the temperament become calmer, gives as yet no prospect of a cure of a grave neurosis or psychosis. The communications respecting the influence of the natural climacteric on the course of existing nervous disorders are too contradictory to enable us to form a right judgment.

"Castration is indicated in a psychosis evoked or maintained by pathological alteration of the sexual organs, and in a neurosis originating from the same source, as soon as this imperils life, or hinders all occupation and all enjoyment of life. The indication is also present when that disease represents only one causal factor in the genesis of the affection, without the removal of which a cure is not to be thought of. Of course, also, the remaining causes of suffering must be in this case accessible to treatment. *Castration must actually affect the cause which occasions or keeps up nervous irritation.* The proof that a neurosis or a group of nervous symptoms has its cause in an affection of the genital organs cannot always be easily given. The simultaneousness of the two things proves, of course, nothing by itself.

"All operations which are undertaken without the presence of a disease or anomaly in the sexual system are, according to the present stand-point of our knowledge, unjustifiable. The mere presence, however, of a pathological change in the genital system, as has commonly been held, is not sufficient, and a strict proof of the causative connection between that change and the nervous disorder has to be demanded.

"In order to insure success we must very accurately lay down the indica-

tion for each individual case, especially keep apart the various causal motors concerned in the production of the nervous disorders, and be sure that we do not merely touch on the sexual factor, but also be able to put aside other existing injurious influences. The execution of the operation and a careful after-treatment, in reference to the possible consequences, have still to be very carefully considered."

ROBERT BATTEY disclaims any attempt to cure mental and nervous disorders by the removal of healthy ovaries or of healthy tubes. The misconception on this point arose largely from his ignorance of both the histology and pathology of the ovaries, in that at first he removed ovaries erro-

these disorders are attended with well-recognized organic disease of the ovaries. The results of cases which have had two years or more to test them have been tabulated as below.

In my own cases a patient who has seemed to be entirely well at three or even six months after operation has afterwards relapsed again into the old rut. *Per contra*: another case which has been little, if at all, benefited during the first year, at the expiration of two or even three years, proves to be soundly cured. I am quite convinced of the fact that earlier operation of neurotic cases, before the nervous system has become too much enslaved, can alone yield results fully satisfactory.

	CURED.	IMPROVED.	NOT IMPROVED.	TOTAL.
Oöphoromania	1	4	2	7
Oöphoro-epilepsy	9	0	0	9
Oöphoralgia	13	3	4	20
Total	23	7	6	36

neously supposed to be healthy, and gave to the operation the unfortunate and now obsolete name of "normal ovariectomy."

The mental and nervous disorders for the relief of which castration has been performed may be divided into three classes,—namely, oöphoromania, oöphoro-epilepsy, and oöphoralgia. The prefix oöphoro is used instead of hystero, because he believes that these disorders are due to irritation proceeding from the ovaries, and not from the uterus. But the operation is never performed except when

The experience of a few American operators are summed up in their own words. Among them are Professor Wm. H. Byford, of Chicago; Professor Reamy, of Cincinnati; Professor M. D. Mann, of Buffalo; Dr. R. S. Sutton, of Pittsburg, Professor W. T. Howard, of Baltimore; Dr. H. P. C. Wilson, and Dr. R. T. Wilson, of Baltimore; Drs. T. A. Emmet and T. G. Thomas, of New York. They all agree that castration for nervous disorders should be done only when there exists organic disease of the ovaries, standing in an evident causal relation.

SOCIETY REPORTS.

The Gynæcological Society of Boston.

DR. JOHN C. IRISH IN THE CHAIR.

Regular Meeting, April 12, 1894. Albert H. Tuttle, M.D., Secretary.

PATHOLOGICAL SPECIMENS.

DR. TUTTLE exhibited a uterus with both tubes and ovaries attached, removed by the supravaginal route three days before. The uterus presented a small subserous fibroid situated anteriorly, an interstitial fibroid in the posterior part of the cervix, and a malignant growth situated at the fundus which occupied the cavity of the uterus. There was also a cystic degeneration of the right ovary. Half a pint of the malignant mass had been curetted away three weeks previously, and as much more on a former occasion, as a result of which the uterus had contracted down into a firm, thickened body. The patient had been under treatment for over a year, with the use of ergot and tonics, and had been in a fair condition of health until within a month of entering the hospital, the growth, according to the statement of her attending physician, having diminished from the size of a cocoanut to that of a large orange during this period.

DR. AUGUSTUS P. CLARKE read a paper on "The Treatment of Fibromyomata of the Uterus."

DISCUSSION.

DR. IRISH said he would like to ask a question, to be answered if possible

in the discussion, Just what do high intensities of electricity do to the tumor?

DR. W. S. BROWN: There is no doubt but what Cutter was the first man that introduced the application of electricity in the treatment of fibroid tumors. He came to the Middlesex East District Society, and brought with him a battery and a piece of beef, and there demonstrated that a certain action took place when a strong current of electricity was passed through the beef, which resulted in the deposition at the poles of elements from the broken-down constituents of the meat. I asked him why he did not apply this treatment to fibroid tumors, and he answered he would if he had a case to try it on. A case was then presented from Dr. Brown's practice, but the first attempt, owing to the insufficient strength of the needle to penetrate the tumor, was a failure. He then devised a new needle, which Dr. Brown says resembled a meat skewer with double sharp edges more than anything else, and with which he operated on quite a large number of tumors, stabbing into them in a way which was frightful to see. On one occasion Dr. Marion Sims was present, and manifested a decidedly startled movement as the needle was plunged into the tumor. Several

deaths occurred in Cutter's practice, but Dr. Brown thought they were not due to the operation or the electricity. The effect on the patient was the only means by which Cutter determined when the patient had received sufficient electricity. Dr. Brown knew of several successes in the practice of Dr. Cutter; one of which, from a bedridden condition, is enjoying good health at present, and has for many years, doing all her household work.

Dr. F. H. MORSE did not believe in trusting to the effect of the electricity on the patient to gauge the quantity which should be given in a particular case; the quantity should be accurately measured by the galvanometer just as any other remedial agent, and given in specific dose. This is the only means by which electricity can be scientifically administered. A correct diagnosis on all occasions is very important, but the complications of the principal disease are not always determinable, and acites, peri-uterine inflammation, or salpingitis, conditions which contraindicate the use of electricity, may be present in uncertain cases, and cause pain during and continuing after the administration of as low intensities as fifty to seventy-five millimetres. The persistence of pain during and after the use of a low current shows there is inflammation present, and that electricity should not be employed. In his last cases Dr. Morse rarely employed over 100 to 150 milliampères, and then only in non-hæmorrhagic cases where there was no pain present. Where the pain is due to the size and pressure of the growth, mild treatment is employed to relieve this condition before resorting to the more severe measures. The difficulty in dealing with patients is

due to the fact that two or three *séances* are required to give the patient confidence in the electrical treatment, and by this time they are so much benefited that they believe no more treatment is necessary, and consequently they leave off. Recently a case was sent by Dr. Palmer for treatment, where there was a nodular condition of the uterus and submucous fibroids, causing hæmorrhage for three years, to such an extent as to prevent the patient leaving home. Three applications of fifty milliampères were administered, and the hæmorrhage stopped for fourteen days; when it returned an unpleasant odor was detected, and inspection showed a broken-down fibroid. The patient was etherized, and a portion of the mass removed, but she died later from septicæmia. This is the only case of his thirty-four but what has done well under electrical treatment. He does not use a needle.

Dr. LAWSON has followed carefully for many years the history of the treatment of fibroids in the practice of New York physicians, and he has had considerable experience both in the surgical and electrical treatment, and as a conclusion believes it questionable if anything but the surgical treatment will result in brilliant success. Before the menopause the tumor is usually in an active state, whereas after this period it becomes passive. Hæmorrhage is often due to inflammatory complications, but depends largely on the activity of the tumor and its seat, whether submucous and interstitial or subserous. If the tumor is in an active condition with inflammatory changes and hæmorrhages, the treatment devised by Atlee, of Philadelphia, is often very useful,—

viz., large doses (20-60 grains) of muriate of ammonia, t. i. d., combined with small doses of bichloride of mercury, and persisted in for several months. The treatment does no harm, and it removes the pain, tenderness, sense of weight, and aching. When hæmorrhages are present, digitalis may be combined with benefit. Sims recommended the use of the faradic current, and Emmet employed the negative pole in the uterus; with a mild current this seems to have a soothing effect, especially when the tumor is not in an active state, but under these circumstances the tumor has a natural tendency towards improvement. The large doses employed by Apostoli and European electrotherapeutists are better borne by European than the more sensitive natures of American women. With calcareous changes, electricity is of no use, and the growth should be let alone.

Dr. BATES: "If the liver and portal system are looked after, it will have a good effect on the uterus," so Dr. Warner used to say. For this purpose both bichloride of mercury and ammonium chloride are useful. She has noticed that a weak heart is often a complication of the fibroid condition. In one of her cases she thinks the fatal issue was due to the inflammatory action directly produced by the sound in giving electricity, and she is afraid of strong galvanic currents.

Dr. TUTTLE: The development of hysterectomy is closely associated with the treatment of fibromyomatous growths of the uterus, and the advance in methods of operating by which means the mortality is greatly reduced marks the advance in our

treatment of fibroids. Our president, in a concise and unequivocal statement, has defined clearly how we should deal with these growths in certain stages of their development: "When a woman with a fibroid begins to fail in health, and there is no other definite cause for it, the tumor is undergoing malignant changes and must come out." That these changes occur in fibroid growths have long been known, but their importance is more greatly appreciated at the present day, and in the specimen I have just exhibited there is much evidence to prove that it is an example of such a change. By means of total extirpation of the uterus, the mortality of hysterectomy—formerly so great in the abdominal operation—will be greatly reduced, and ought not to much exceed that of the vaginal operation. A fibroid may become what we can call *clinically malignant*,—i.e., from the effect it has by virtue of its increase in size on its environments: hæmorrhages, sloughing, and subsequent infection, and from the continuous discharges resulting from ulcerations, not only of the tissues of the uterus itself, but also those of other parts, as even the peritoneal cavity, which will ultimately destroy the life of the patient if not corrected, although the changes involved are not malignant in the ordinary sense of cancerous or sarcomatous. A watery discharge, more or less profuse, with or without odor, and perhaps bloody at intervals, should excite a suspicion that malignant changes are taking place in the uterus, and the patient should be placed under close observation for further and confirmatory evidence.

Dr. IRISH: I asked a question at

the beginning of the discussion, but it has not been answered. The tumor or its capsule is never the seat of inflammatory changes, but this cannot be said of the ovaries, tubes, and uterine structures, which are often inflamed. The fibroid structure is very poor in blood-supply, and the hæmorrhage does not come from the growth itself, but from the endometrium, which is affected by the presence of the growth. Consequently, hæmorrhage only occurs in the interstitial and submucous forms and not in the subserous. We do not know what the electricity does to the tumor, and we only estimate its value from the practical result. Dr. Morse's testimony in this respect has a certain value, and is to be added to that of others which must be viewed as a whole, when the trouble of reaching at a positive conclusion is at once manifest by the conflicting evidence. Of the twenty-three cases of hysterectomy Dr. Irish has operated upon since January, 1893, two-thirds had faithfully received electricity by Apostoli's method. He has never seen any benefit from electricity in the treatment of fibroids except in two ways,—*i.e.*, by diminution of hæmorrhage and by relief from the pressure symptoms. In no instance has he seen the growth arrested or its change to malignancy averted. Curettement for the relief of hæmorrhage, in his experience, is preferable to electricity, but both fail in a large per cent. of cases from obvious reason, the inability to reach the seat of hæmorrhage, from the tortuous character of the passage, with either sound or curette. Ascites about a tumor always shows it is malignant. The twenty-three cases were operated upon because of

hæmorrhage, loss of color, pallor, tingeing of the skin, and nearly all showed functional disturbance of the heart. The recent success in treatment is due to improved methods of operating and largely to the advantages gained by the Trendelenburg posture. If every woman with a fibroid was operated upon, no matter what condition she might be in, the sum total of the length of human life and health would be greatly increased over the present. The best practice at present is, when the pedicle can be reduced and brought out of abdominal cavity easily and tied, to do so, otherwise make a complete removal.

Dr. CLARKE, in closing the discussion, remarked that he was much pleased at the way the subject had been considered by the various speakers. He said, however, in dealing with this, as with some other subjects that had often been uppermost in the public mind, speakers are liable to approach it with knowledge too much scattered. What he should insist on was a greater discrimination as to the different phases the disease may assume. In devising a method of treatment for such growths, consideration should be had as to their grade, character, and situation. Experience shows that what is excellent treatment for one variety of myoma is often worse than useless for another. He was willing to concede that, in the interstitial and in the subserous varieties when the development was assuming rapid proportions on account of the presence of an undue admixture of muscular element, properly conducted applications of electricity will prove to be beneficial through the contractions set up in the strictly

myomatous formation. That electricity thus employed is a sort of oxytocic. That the dangers resulting from the employment of the high intensities is from the shock that is induced and from the occurrence of para-uterine inflammation. It is surprising to see how readily hæmorrhage can sometimes be controlled or arrested by the effecting even a slight diminution in the growth. So sensitive are the vascular tissues that a limited reduction of the tumor on the endometrium will often materially

lessen the arterial tension, and thus relieve the urgent symptoms. Surgical measures, he was sure, are coming more and more to be employed; he therefore urged that warning should be taken against allowing such a line of procedure to become a mere fad, and that the bolder operations, such as hysterectomy, should only be resorted to after careful consideration of all the factors occurring in the individual instances in which such an operation is clearly and unmistakably indicated.

The Cincinnati Obstetrical Society.

April 26, 1894.

A CASE OF PUERPERAL FEVER.

DR. TAYLOR: Recently I saw a case of puerperal fever. A primipara, who had been delivered ten days, had a large laceration, which was immediately closed. Four or five days after delivery she developed a high temperature, and when I saw her she was about dying. There had been no local lesion, no peritonitis apparently, but it was one of those cases of general septicæmia, with rapid pulse, defective circulation in the extremities, and high temperature. Various means had been resorted to to reduce it, without avail. She had been stimulated very freely, and she died about eighteen hours after I saw her.

Another case I saw with Dr. Keck in this city. The patient had been attended by a midwife, and eight or ten days after delivery he was called to see her because of the existing conditions. When I saw her she had peritonitis, marked tympanites, and

tenderness on pressure. Her temperature had been reduced by the use of acetanilide, but elevation re-developed and she died. The midwife said she had used carbolic acid, and had had no other case.

The case which I have seen this week was a woman about three months advanced in pregnancy, and without obvious cause had an abortion with retention of part of the decidua, and it was allowed to remain until there began to be some offensive odor, and then the uterus was curetted, and the physician, who was an experienced and competent man, was very positive he had removed everything. He had examined the decidua. This woman has now been sick for a week. Her temperature has fluctuated very much. Once or twice I have seen her with a record of 99° F., and again it has advanced to 105° F. In this case there is no local lesion whatever. The abdomen is slightly tympanitic,

but not more than sometimes we see after delivery when the condition is entirely normal. She has no tenderness about the abdomen. Her tongue has been slightly coated, but with a clean, moist edge, like the tongue of a convalescent. She vomited once, which was probably because of what she had taken into her stomach. She has had a number of rigors, and this morning had one. Her pulse has fluctuated between 103 and 120. Her temperature has gone up and down very remarkably, and yesterday noon it was down to $100\frac{1}{2}^{\circ}$ F. She had a chill, and it rose. It came down again, and she had a rigor during the night, and it went up again to over 103° F. She has been treated by stimulation, washing out the vagina, thorough cleansing of the uterus at the time of the removal of all the decidua. She had suppression of urine to a very marked degree, but yesterday began to secrete freely, and she is now passing a very good quantity.

These cases are entirely separated, widely separated, so that you cannot suppose they were in any way connected in their origin. Two of the cases have proved fatal, and the one I am now attending we regard as a very serious case.

PRESIDENT: Don't you think the last case was more of a purulent case from retention, or do you consider it peritonitis?

I think they are all cases of sepsis. In this case I should say there has been absorption of septic matter from the retained decidua.

Dr. CLEVELAND: This case is recent, and I look upon it as what we used to call puerperal fever, puerperal peritonitis. I saw the case in connection with a midwife on the morning of

April 5. I was sent for by the midwife to deliver the woman. The patient had been in labor for more than twenty-four hours, and was very much exhausted. The head of the child was impacted in the pelvis, and either the uterus had lost its power or, at any rate, there was no apparent effect on the child when she would have a pain. I delivered the child without much difficulty. The family told me I need not come again unless I was sent for, and I warned the midwife if there was any fever or pain to send for me. I did not hear from her until the second day after the delivery, April 7, and then I found her in a most dangerous condition. She had a pulse that ranged from 120 to 130, her tongue dry, and she was suffering extreme nervous perturbations. Her bowels were extremely tender. I did not examine her to see the condition of the uterus, because I did not think it would do any good, and did not care about carrying the infection away. Large doses of quinine had no effect. I got her bowels open with salts, sulphate of magnesia, as soon as I could, and had the nurse wash out the vagina with warm water and boracic acid as soon as possible. I treated the case symptomatically, quieting the pain and perturbation, and getting down the fever as well as possible, but the symptoms went on from bad to worse, and she died, as those malignant cases frequently do, within twenty-four or thirty-six hours after I saw her.

I cannot imagine the use of the forceps had anything to do in this case. I have not seen a case of puerperal fever before for a long time, and, so far as I can find out from the midwife, she had not seen any. I am always fearful of the midwives be-

cause they are so careless in the way they examine cases and the way they handle them with regard to carrying about the infection.

Shortly afterwards I had a case to attend in the neighborhood of this midwife, and, in order to save my patient the possibility of calling the midwife in case of emergency, I went to the husband and told him this midwife had a case of puerperal fever, and I did not want him to call her in under any circumstances. He promised me not to do so. A few days afterwards I was called to see this woman at about three o'clock A.M., and about five o'clock I took a little walk, about fifteen or twenty minutes, and when I returned I found the midwife had been called in and had delivered the child and the after-birth. Of course, I was very much chagrined, and watched for results. There were no bad symptoms whatever; she got along as well as I ever saw a woman. Now, I do not know whether that was an isolated case or not, or whether it was a specific puerperal fever or not, but I suppose it was.

It is singular the way these cases seem to spring up, and the way they are propagated one from another, while in some cases where there is opportunity to carry infection it is not carried. But we all know very well that during the epidemic of puerperal fever cases were carried from one to another. I have seen three women, all attended by the same midwife, in the same square all dead at once. The disease had apparently been carried by this midwife. I do not think there is any doubt about the infection being carried from one to another, but certainly it is not carried sometimes when it seems it

should be. It is probable the condition of the woman's health accounts for this to a certain extent.

PRESIDENT: Do you consider that a case of sepsis or not?

I consider all fevers cases of sepsis.

Now, the question is whether it is caused by bacteria or sepsis.

I suppose the bacteria is back of the sepsis.

For instance, you would not think a person with erysipelas could produce puerperal fever?

I have heard that subject discussed a great deal, but would hardly know how to discuss it.

Dr. TAYLOR: In the case I saw, which had been attended by a midwife, I asked her particularly about her custom, and she said she always used a solution of carbolic acid to wash her hands and the patient. Of course, I have no evidence that was the case.

Dr. CLEVELAND: Don't you think soap and water are better than carbolic acid, because you cannot use the carbolic acid strong enough? With soap and water you can, at any rate, secure asepsis. I do not think the carbolic acid when so diluted would destroy sepsis.

Dr. RICKETTS: With regard to Dr. Taylor's cases, I would like to ask him if he thinks the lacerated perineum, which was stitched up, had any connection or bearing upon the case?

It may have had. Of course, if there is a large laceration, there is just that much more absorption surface. If she had had no laceration, there could not have been absorption from that place. I did not have anything to do with her until she had been sick for a week. She was well cared for at first; a competent man had charge of her.

Eleventh International Medical Congress.

IN the Section of Obstetrics and Gynæcology there was a general and very interesting discussion on the subject of symphyseotomy, which was opened by Morisani, of Naples, Pinard, of Paris, and Leopold, of Dresden. Morisani said that symphyseotomy is an operation perfectly justified, within the limits of its proper application, both by theoretical reasoning and by clinical experience. These limits ought to be exactly determined, and for his own part he does not accept symphyseotomy when the contraction of the pelvis is such that the conjugata vera is less than sixty-seven millimetres, the maximum limit is more variable, but, as a rule, it ought not to be more than eighty-six millimetres.

The foetus must be living; there is no indication for symphyseotomy when the foetus is dead, and in this case a reduction of the foetal diameters by craniotomy is preferable.

The conditions for practising the operation are in general as follows:

Pregnancy should be at term; labor advanced; the dilatation-almost complete.

As far as concerns the operative technique, this is well known; there has been some discussion whether the symphysis should be divided from above downward or from below upward; this is a matter of indifference. More important is the question, whether the subpubic ligament should be divided or not. Contrary to the opinion of Leopold, Morisani believes that it should be completely divided in order to assure the perfect separation of the pubic bones.

After the section of the symphysis

the labor can be left to nature, but when the pains are too weak, it is often necessary to employ the forceps.

The osseous suture advised by Zweifel seems unnecessary to Morisani, and the same may be said of the fixed apparatus. A simple retentive bandage and tying the legs together is sufficient.

He believes that in general, when the foetus is living, if symphyseotomy is sufficient, it should be preferred to embryotomy, and even to the Cæsearean section. He is not yet certain whether, in cases of pelvic contraction, it is preferable to bring about premature labor or to await the end of pregnancy to perform symphyseotomy. He condemns the proposed combination of symphyseotomy and induced premature labor as well as that between symphyseotomy and embryotomy.

Pinard presented to the congress, besides his own clinical experiences, the anatomical studies of Farabeuf. He displays enthusiasm for symphyseotomy, which he would like to see used in preference to the other obstetric operations, urging this much more than the others who discussed the subject.

Leopold, after having declared that symphyseotomy had acquired the right to a prominent place in the science of our epoch, asserts that it cannot enter into general practice, and will always have to be reserved for clinical institutions. The dangers which it presents, such as hæmorrhages, vaginal lesions, and sepsis, with the difficulties involved in the post-operative treatment, will make it

difficult in practice to substitute this operation for version and embryotomy. He believes that symphyseotomy can be performed with a *conjuncta vera* of sixty-five millimetres and even of sixty, but with these minimal limits he prefers craniotomy.

Symphyseotomy is to be performed only when it has not been possible to terminate pregnancy sufficiently early, and when at term, version followed by an attempt at manual extraction has proved fruitless.

In the very instructive discussion which followed these introductions, Sanger declared that he did not believe symphyseotomy superior to Cæsarean section even in the cases in which the former was entirely indicated from an operative point of view. According to Sanger, Cæsarean section is more exact and very little post operative treatment is required. Many women, who have undergone symphyseotomy would have had more advantages from Cæsarean section.

Zweifel, opposing the opinion of Leopold, believes that symphyseotomy is possible in the hands of all physicians, and says that the operation is certainly destined to come into general use. He accepts the limit of sixty-five millimetres, which is almost exactly that established by Morisani. He advises a transverse suprapubic incision for soft parts and a division of the symphysis with a probe-pointed bistoury; it is necessary to avoid too great a separation of the legs.

Varnier, with his statistics at hand, maintains, in opposition to Leopold, that symphyseotomy is superior in every respect to induced premature labor and to version, and says that already the cases of symphyseotomy

operated in private practice prove that it is possible for the operation to come into general use.

Morisani and Leopold replied, confirming what they had said in their introductions, and the first, taking his text from a communication from Maucusi, about eight symphyseotomies, some of which were said not to have been indicated, declared that in order not to throw symphyseotomy into undeserved discredit, it is absolutely necessary to perform it only within the limits indicated by him and accepted by the majority of operators, without absolutely rejecting other obstetrical operations, such as version and induced premature labor, which also have their proper indications.

There was another important discussion on the treatment of the pedicle after myomectomy. This was opened by Mangiagalli, of Milan, and Martin, of Berlin.

MANGIAGALLI said, in the first place, that his task would have been much more easy some years ago, when as yet nothing had been said about total vaginal or vagino-abdominal hysterectomy, and it was sufficient to choose either the external or the internal treatment of the pedicle, as this question then was the principal point in all discussions upon myomectomy of the uterus; to-day, however, other elements, which are more important concerning the treatment of the pedicle, had to enter into the question.

That the latter is not of capital importance is shown by the fact which, with statistics at hand, was brilliantly demonstrated by him that all the methods for the treatment of the pedicle are good, and that all have progressively improved. Sta-

tistics show the fact that the mortality has diminished every year by whatever method was employed.

In regard to the operative prognosis, greater attention is deserved in regard to other conditions connected particularly with the situation of the tumor. As a matter of fact, no matter what methods of operating are used, the intraligamentous myomas give worse results than the others, and by as much more so as the tumor is more voluminous. These tumors at present are arranged in separate statistics, because they give much greater mortality than do either the subserous, submucous, or interstitial, which, on the average, show a mortality which is very reassuring, being about five per cent., whether they are treated by the external method or by the intra-abdominal procedure.

The author presents the brilliant statistics of his own operations in hysterectomy, and finally, coming to speak of vaginal hysterectomy, he says that this is certainly a precious conquest in gynecology, and one the future of which seems by so much the more favorable since its limits can be enlarged by subdivision of the tumor and by forcipressure.

MARTIN, after having briefly related the history of myomectomy and of its principal modifications, said that the care which operators have given to the treatment of the pedicle at all times shows that it has always been considered as a source of danger, especially of hæmorrhage and infection.

Since these dangers are inherent in the presence of the pedicle, it was logical to do away with the latter entirely, and therefore Martin decided, in 1888, to substitute total extirpation of the uterus for supravaginal

amputation. He commenced with extirpation by the abdominal way.

First he left a drainage-tube in the abdominal cavity, and he had a mortality of 30.23 per cent.; then he dispensed with drainage, and the mortality descended to 9.25 per cent. In his last series the mortality has been reduced to 3.84 per cent. The following are the measures which have enabled Martin to obtain this improvement: (*a*) curetting and disinfecting the uterine cavity and the vaginal canal; (*b*) abdominal section; (*c*) lifting out of the tumor; (*d*) ligature and section of the broad and round ligaments down to the cervix; (*e*) opening the posterior fornix; (*f*) suture of the vagino-peritoneal border; (*g*) excision of the cervix all around and completion of the suturing; (*h*) drawing the suture threads down into the vagina and occlusion of the peritoneum. In this manner he has operated on twenty-six women, and has obtained twenty-five complete cures.

In the discussion which followed this report, Landau, of Berlin, after having said that he had used the extra-peritoneal treatment of the pedicle for a long time with success, having only one death in thirty cases, added that now he prefers to employ the vaginal method of Péan, or in some cases the combined method of Martin. His line of conduct in general is as follows: For tumors which reach but do not pass beyond the umbilicus, vaginal hysterectomy by *morcellement*. For tumors which pass the umbilicus, rapid enucleation and hysterectomy by abdominal incision, followed immediately by extirpation through the vagina of the remaining part of the pedicle. He does not close the peritoneal cavity.

CARLE, of Turin, performs total hysterectomy by abdominal incision, with a method of his own, which differs from Martin's, inasmuch as he makes a subperitoneal enucleation of the uterus, and, after having tied the uterine arteries and dissected out the cervix as far as the vaginal insertion, he applies a clamp to the cervix and cuts on the vaginal wall itself, afterwards uniting the margin of the aperture with some points of suture; thus he secures himself from the chances of infection.

BANTOCK said that he had never been willing to abandon the extraperitoneal treatment of the pedicle, and that he had had the satisfaction of seeing his method remain always on a level with the others which have been successively devised and put into execution, so that he declares that he does not feel obliged to substitute any of these methods for his own, which he prefers.

JACOB, of Brussels, after having said that the total extirpation of the uterus which enables us to avoid all anxiety about the treatment of the pedicle seems to him to be an ideal procedure, stated that he had been contented with the following method of operating: Opening of the anterior and posterior fornices and securing the uterine arteries, abdominal section and securing the broad ligaments through the abdominal incision by means of two clamps invented by him; these are so constructed that they remained locked after closing them, while the handles can be im-

mediately changed for others introduced through the vagina. The removal of the tumor after cutting the ligaments inside of the clamps. Closure of the abdominal incision and dressing the vaginal opening. This method is rapid and entirely safe against hæmorrhage.

CALDERENI, of Parma, examining his statistics, is inclined to favor the extraperitoneal treatment of the pedicle.

DOYEN, of Rheims, prefers the evacuation of large tumors by *morcelement*, after Péan's method, and says that he likes to employ vaginal hysterectomy with some modifications of his own for the removal even of the largest myomas.

CHIARLEONI, of Catania, states that he prefers total vaginal extirpation.

MANGIAGALLI, replying to the various speakers, declares justly that from the discussion it may be seen how true was the statement which he had already made, that all the methods had been used with good results, so that it is impossible to decide in favor of one rather than another. What surprised him the most in this discussion is the statement of Doyen, who would like to extend vaginal hysterectomy for the removal even of those very large tumors which extend beyond the umbilicus, and are much more easily dealt with by abdominal incision. To try to remove these as Doyen suggests would be to go unnecessarily in search of difficulties.

DR. T. ROSSI DORIA,

Il Policlinico.

ABSTRACTS FROM CURRENT LITERATURE.

BY CHARLES G. CUMSTON, M.D.,

BOSTON, MASS.

Uretero-Cystoneostomy.

AT a meeting of the Academy of Medicine of Paris, November 7, 1893, Dr. BAZY (*Gazette de Gynécologie*, December 1, 1893) read a paper with the above title, by which he meant an artificial opening of the ureter into the bladder in the case of uretero-vaginal fistula with obliteration of the ureter. It is a means of treatment of hydronephrosis produced by stricture of the vesical end of the ureter. Uretero vaginal fistulæ, following pinching of the ureter and its obliteration, have, up to the present time, been treated by nephrectomy. Dr. Chaput has succeeded in grafting the ureter to the colon, but this was only substituting one infirmity for another, less disagreeable, however, and dangerous, perhaps, in the future. The indication is to make a physiological opening,—that is to say, to have the opening of the ureter into the bladder as nature has done. This is what Dr. Bazy has realized by a new operation, which might be called uretero-cystoneostomy. He had charge of a patient who had had vaginal hysterectomy performed for fibroma three months previously. At the end of the operation, urine came away by the vagina, and a diagnosis of uretero-vaginal fistula was made. As to his operation, Dr. Bazy performed a laparotomy, and searched for the lower end of the ureter, which he found distended; it was separated from the bladder by a cicatricial tissue about two centimetres

long. After a puncture of the ureter, it was cut, and the bladder was incised. The lips of the ureter and vesical incision were sutured with silk; the peritoneum was closed up, as was the abdomen, after a piece of gauze had been inserted. The patient never lost a drop of urine by the vagina after the operation. The ureter and the bladder had each a soft red rubber catheter *in situ* for five days. A cystoscopic examination one month later showed that the orifice of the ureter was directed obliquely in the opposite direction from what it is normally, and about a centimetre in length. The kidney, which was notably increased in size before the operation,—in other words, there was hydronephrosis,—had regained its normal size. Consequently it is possible, in presence of an infirmity so disgusting, that surgery can do reparative and conservative work simultaneously. Conclusions:

- (1) Cure an infirmity without substituting another for it.
- (2) Preserve the kidney, and re-establish its physiological functions.
- (3) The operation is better in cases where neither the ureter, pelvis of the kidney, nor the kidney itself, are infected. It might be done in cases where these organs were infected, for then it might be possible to disinfect them by a ureteral sound. Indications for performing nephrectomy are lessened.

Hydrastinine in Uterine Hæmorrhage.

DR. GOTTSCHALK (*Brooklyn Medical Journal*, 1893) believes that hydrastinine can be employed in hæmorrhage depending on congestion of the uterus. For example, in the often very profuse menorrhagia of single women which are not associated with any pathological conditions of the genital organs; also in hæmorrhage from endometritis, in which case its action

is palliative. As a prophylactic it is useful before or during the first returning profuse menstruation after curettement of the endometrium. Menorrhagia due to lesions in the pelvic organs are also amenable to it. Climacteric menorrhagia is greatly diminished by a faithfully carried out treatment with hydrastinine.

The Nerve Theory of Menstruation.

CHRISTOPHER MARTIN (*The British Gynecological Journal*, November, 1893): The conclusions of this well-studied paper are as follows:

(1) Menstruation is a process directly controlled by a special nerve-centre.

(2) That this centre is situated in the lumbar part of the spinal cord.

(3) That the changes in the uterine

mucosa during the period are brought about by catabolic nerves, and during the interval by anabolic nerves.

(4) That the menstrual impulses reach the uterus either through the pelvic splanchnics or the ovarian plexus,—possibly both.

(5) That removal of the uterine appendages arrests menstruation by severing the menstrual nerves.

Treatment of Prolapsus of the Uterus.

DR. LE DEUTU (*La Tribune Médicale*, February 1, 1894) read a paper at the Surgical Society of Paris, in which he related two cases of hysterectomy performed for prolapsus uteri, the results being most unfavorable as regards this operation. The first patient, aged 37 years, was operated on March 7, 1892. Besides the prolapsus there was a double salpingitis and a hypertrophy of the uterus, whose cavity measured nearly 17 centimetres. The operation was quite easy, but the bladder was wounded, and the patient recovered with a vesico-vaginal fistula.

This was closed later by an autoplasmic operation. Some months later the patient returned with a relapse in the form of a vesico-rectocele. The second case was a woman, aged 52 years, whose prolapsed uterus was filled with fibroma. Hysterectomy was performed, and, as in the preceding case, a relapse soon followed. In two other cases of prolapsus Dr. Le Deutu amputated the cervix. The results were the same as in the hysterectomies. The author thinks that hysterectomy is far too serious an operation for prolapsus.

Gonorrhœal Vaginitis.

DR. G. D'AULNAY (*Semaine Médicale*, No. 53, 1893):

R	Methylene blue,	10.0
	Alcohol,	15.0
	Potass.,	0.20
	Water,	200.0

M. D. S. External use only.

The vagina is cleaned with absorbent cotton and washed in a 1-1000 solution of sublimate. Two or three tampons of cotton wet with the solution of blue of methylene are then introduced into the posterior vaginal *cul-de-sac*. The vaginal orifice is occluded by a dry tampon. This dressing is left for two days. From the

commencement of the treatment the pains produced by the vaginitis lessen considerably. The tampons are removed in two days and two glycerin tampons are substituted; these are changed the next day. Ordinarily the vagina is free from staining on the fourth day, and from this time there is generally no more secretion, only a simple congestion of the mucous membrane remaining, which in its turn disappears in about twenty days under the influence of simple cotton dressings, combined or not with daily injections of a 1-1000 solution of bichloride of mercury.

The Importance of Menstruation in Ascertaining Mental Irresponsibility.

KRAFFT-EBING (*Jahrbuch für Psychiat.*, Vol. x): (1) Psychical integrity of women during their menses is a question most useful to consider in legal medicine.

(2) It appears expedient to find out if the crime committed by the prisoner coincided with her menstrual period. Under the term "period," the author includes not only the days during which blood comes away, but those which precede and follow it.

(3) An examination of the mental condition should be advised when the criminal act coincides with this period. This examination is indispensable when the history of the patient reveals a neuropathic taint or the existence of mental trouble during former menstrual periods, or when the act itself discloses peculiar changes.

(4) When it is evident that the menstrual process exercised a power-

ful influence on the mental life of the subject, she should have the benefit of this fact, even if no menstrual insanity can be made out in what concerns the application of the law in the given case.

(5) When the crime coincides with the epoch of menstruation in a feeble-minded person, she should be declared irresponsible, for there is reason to believe that the act was one of passionate impulse.

(6) But the subjects who obtain a verdict of "not guilty" on the plea of mental menstrual trouble should be considered as extremely dangerous, and are to be put under a severe watch at the epoch of their menses. The best thing is to put them into an asylum, where they will have good care and often a cure is brought about. The author gives twelve cases.

Permanganate of Potassium in Vulvitis of Little Girls.

DR. ROCAZ (*Annales de la Policlinique de Bordeaux*) publishes the excellent results that he obtained in Dr. Monod's service by the use of abundant irrigations of permanganate of potassium in vulvo-vaginitis of little girls, a disease so often difficult to cure. The technique is as follows: Begin with a solution of 1-4000 and increase it until a 4-1000 is supported by the patient. The child should be placed on the side of the bed in the speculum position; a rubber male catheter is introduced through the orifice of the hymen well up into the vagina; the catheter is joined to a rubber pipe, on the end of which is a

glass funnel into which the solution is poured; by elevating the funnel about a metre above the patient sufficient force of irrigation is obtained; a half a litre of the solution should be used at each *séance*. The operation is not at all painful, and the child supports it well. The first injection produces sometimes a slight increase in the discharge, but this soon passes, and *all the patients* are cured in from two weeks to one month by this treatment, the discharge having stopped definitely. Baths are given between the injections. The author has never observed any inflammatory symptoms.

Albuminuria in Pregnancy as a Cause of Death to the Fœtus.

DR. OUI (*Journal de Médecine de Bordeaux*, October 15, 1893), since last January, has treated twelve cases of albuminuria in pregnant women, eight of the children died, four of them lived. Of the eight deaths, one was due to hæmorrhage from a bad insertion of the placenta; another from hæmorrhage from the meninges. There remain six fatal cases out of twelve, consequently 50 per cent., in which four were found to have multiple intraplacental hæmorrhages. These hæmorrhages are frequently met with in albuminuria of pregnancy, and many attain very great proportions. Dr. Oui cites a case in which the clots adherent to the placenta weighed as much as the organ itself. It is to be remarked that these were found, with but one exception, in women with albuminuria, who had neglected

themselves, and had not been put on milk diet. Consequently, it is not only for the mother, but also for the fœtus, that the milk diet is very useful, and this is shown in a recent statistic of Bridier, relating to 250 cases of albuminuria, the mortality for the children being only 20 per cent., as the greater number of the women had been treated, making a great contrast with the author's cases, where the mothers had been without treatment. Bringing about premature labor before the death of the child is a conduct to be discussed, but this may be done, if, after a milk diet, no amelioration in the albuminuria is produced. On *résumé*, absolute milk diet, and if the albuminuria does not diminish, then induce premature labor. (*Revue générale de Médecine*, December 6, 1893.)

The Influence of Acute Infectious Diseases on Pregnancy.

At a recent meeting of La Société Médicale des Hôpitaux, Dr. LA GENDRE (*Journal de Médecine et de Chirurgie pratiques*, February 10, 1893) read a paper with the above title based on the study of cases entering l'Hôpital Saint Antonie with scarlet fever, erysipelas, measles, and diphtheria. Of twenty pregnant women one only

died, and this patient had a most toxic diphtheria. The author concludes from these facts that scarlet fever and erysipelas have not the bad influence on pregnancy that is generally accepted; but this is only the case when the most careful antiseptic precautions have been taken.

The Treatment of Pruritus Vulvæ.

DR. LUTAUD (*Revue Obstétricale et Gynécologique*, January, 1894). Although pruritus of the vulva belongs, as initial symptom, to all varieties of vulvitis, the therapeutics of this affection should be the object of attention to the physician, not only because it is often idiopathic, but also on account of its usual persistence. Look in the first place for the general cause,—diabetes, pregnancy, masturbation. Then proceed with a local examination, carefully conducted, to see if there is leucorrhœa, eczema, vegetations, uncleanliness, etc.

(a) *Local Medication*.—(1) Every two hours wash the parts with the following :

R Hydrarg. bichlor.,	0.25
Ammon. hydrochlorat.,	0.25
Aq. amygdal. amar.,	200.0

(2) If this formula fails, use the following solution, which should be applied more particularly in the evening. A compress should be wrung out with the solution, and kept in contact with the parts as long as possible :

R Chloral hydrat.,	5.0
Aq. rosæ,	100.0
Aq. dest.,	250.0

(3) For itching prescribe :

R Plumbi acetat.,	10.0
Acid. carbolic.,	5.0
Tinct. opii,	50.0
Aq. bullien.,	500.0

Or :

R Morphin. hydrochlorat.,	0.50
Aq. laurocerasi,	4.0
Sodii borat.,	10.0
Aq. chloroformi.,	500.0

In the daytime, as the application of solutions is difficult to obtain, the author gives the following, which is only palliative, but very efficacious :

R Cocain. hydrochlorat.,	2.0
Adeps. benzoic.,	20.0
Ess. rosæ, q. s.	

In addition, the following ointment will modify the tissues :

R Potass. bromat.,	2.00
Acid. salicylat.,	0.50
Amyl. glycerin,	20.0
Calomel,	0.50

To keep up the action of this ointment it is well to cover it with a powder, such as,—

R Zinci oxyd.,	
Bismuth. subnit.,	ââ 5.0
Lycopod.,	20.0

(4) The greatest intensity of pruritus is reached at bedtime, and during the night some relief may be obtained by applying and keeping in place a poultice of linseed or flour over the vulva; the author advises a few drops of thymic acid to be put on the poultice. Frequent washing of the parts is necessary, warm water to be preferred; vaginal injections should be frequently employed to remove the irritating secretions.

(5) In rebellious cases, the author has obtained favorable results by cauterizing the parts with,—

R Argent. nit.,	1.0
Aq. dest.,	10.0

The cauterization is not to be re-

peated until the desquamation produced by the application has entirely disappeared.

(b) *Internal Medication*.—For insomnia the author prefers the bromides,—

R Ammon. bromid.,	10.0
Chloral. hydrat.,	5.0
Syr. aurant. cort.,	90.0 M.

Sig.—A tablespoonful on going to bed. Another may be taken if the patient awakes in the night.

In cases where the bromides produce erythema give,—

R Sulphonal,	
Antipyrini,	ãã 0.50

In a wafer. Take one or two, if necessary, at bedtime.

Treatment of Acute Metritis.

THE following (*Revue Obstétricale et Gynécologique*, March, 1894) is the medical treatment of inflammation limited to the uterus and independent of any puerperal condition: (1) In the acute stage: absolute rest, poultices, sprinkled with laudanum, to the abdomen, frequent warm vaginal irrigations with an emollient or slightly aromatic liquid, such as the following, which is strongly recommended:

R Chloral hydrate,	
Naphthol,	
Alcoholis,	ãã gms. x.
Aq. dest.,	gms. cxl. M.

Sig.—A tablespoonful to a quart of water at 95° F. for an injection. These should be given with the patient lying down.

After each injection, a tampon of

cotton imbibed with the following formula is placed on the cervix:

R Iodoform,	
Chloral hydrate,	ãã gm. i.
Glycerin,	gms. xxx.

Chomel's iodoform or salol ovules (which are not on the American market, unfortunately) are easy to use, and patients can introduce them without pain. Blisters over the abdomen are indicated when pain is intense and an extension to the peritoneum is feared; they should not remain in place over eight or ten hours. In ordinary cases it is recommended to apply flannel compresses dipped in spirits of turpentine or alcohol and this is covered with a protective. A very common symptom in acute metritis is tympanism and constipa-

tion. The following is good in these cases :

R Chloroformi,	gm. i.
Ess. anis.,	gtts. x.
Ol. ricini,	gms. c. M.

Sig.—A teaspoonful every half hour.

Diet should be light ; principally beef-juice and liquid food, so as to avoid abundant stools, which fatigue the intestine, and consequently the uterus. For pain, opium should only be given as an absolute necessity. Generally, metritis does not give rise to much

pain as long as it does not extend to the peritoneum. In this case opiates should be employed, as in the treatment for peritonitis. All local medication applied directly to the cervix, such as scarifications, leeches, etc., is to be avoided in acute metritis ; local therapeutics being reserved for the subacute and chronic forms. *En résumé*, the treatment of acute metritis has these four indications,—viz., absolute rest, frequent vaginal irrigations, sedatives, and laxatives.

BOOK REVIEWS.

PRÉCIS D'OBSTÉTRIQUE. By Drs. RIBEMONT, DESSAIGNES, AND G. LEPAGE. G. Masson, Publisher. Paris, 1893.

This excellent work on obstetric science cannot receive as long a review as it deserves, on account of limited space, but it can rightly be called a *chef d'œuvre*. The first part of the book is devoted to anatomy, physiology, and histology of the uterus, ovaries, and breasts, and embryology is fully considered.

An important section on the changes that take place in the genital organs, as well as the digestive, respiratory, and urinary systems after impregnation, and during pregnancy, is well treated, as is the one on the signs of pregnancy. Hygeia of pregnancy forms a short, but concise, chapter on the subject ; the authors conclude that, although the questions of exercise, etc., are important, it is still far more so to make repeated ex-

aminations of the urine, to carefully watch the development of the gravid uterus, to make sure that no vice in the conformation of the pelvis, or no juxtauterine tumor exists, which would be an obstacle to labor ; and, lastly, towards the end of pregnancy, to make out the position of the fœtus, correcting it in time, should it present badly. A long and complete chapter follows on obstetrical anti-sepsis, giving many formulæ and valuable hints as to the manner in which the nurse and physician should clean themselves and instruments. Some 200 pages are devoted to labor, the different presentations, and the manner to deal with each, and too much praise cannot be given to the description that the authors have given. Chapters on removing retained placenta, after-pains, care of the baby, apparent death of the infant, and nursing, are in turn considered. The chapter treating acute infectious diseases during pregnancy is good, as is

the one on syphilis, diabetes, and albuminuria. Special chapters are devoted to the pathology of the placenta, diseases of the amnios, diseases of the fœtus, abortion, spontaneous premature delivery, extrauterine pregnancy, twin pregnancy, rickets, malformation of the pelvis, dystocia produced by uterus, fœtus, tumors, etc., and prolapse of the funis. The last 250 pages are devoted to obstetrical operations, and it would be difficult to conceive of a better or more complete description than is here given. The work is illustrated with 476 figures, mostly original, from the pen of Dr. Ribemont-Dessaignes. It is printed on excellent paper with good type, and the work is one to be highly recommended to the accoucheur, and does great credit both to its distinguished authors and to the publisher.

C. G. C.

ANOMALIES OF REFRACTION AND OF THE MUSCLES OF THE EYE. By Dr. FLAVEL B. TIFFANY. Kansas City, Mo.: Hudson-Kimberly Publishing Company, 1894.

Although this book is not one which

pertains to the subjects to which the *ANNALS* are devoted, still, on account of its scientific value, a short notice seems necessary, especially for those devoting their time to pædiatry. The book opens with two chapters treating refraction and reflection of light, scientifically and thoroughly studied by the author. The eye physiologically and anatomically treated forms Chapter III. Emmetropia and ametropia are dealt with at length, and the particularly good chapter on accommodation of the eye will be found most profitable reading. One of the best features of the work is the chapter on examination of the eye, which is clearly put before the reader by the author's text, as well as by a number of excellent figures. Myopia, hypermetropia, astigmatisms, heterophoria, and strabismus are lengthily and interestingly written on, and the work closes with an important chapter on spectacles. The publishers have certainly done excellent work, and the plates and figures are of the best. We congratulate the author of this excellent work and recommend it to the profession.

C. G. C.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of May 3, 1894.

VICE-PRESIDENT DR. J. M. BALDY IN THE CHAIR.

THE INDICATIONS FOR CÆSAREAN SECTION. BY DR. B. C. HIRST. (See page 305.)

DISCUSSION.

DR. RICHARD C. NORRIS:

I have practically little to say, except perhaps to state my belief that there is no problem in obstetrics more difficult to wisely solve than the proper course of action in individual cases of pelvic deformity in which the pelvic measurements are on the border-lines between the indications on the one hand of symphyseotomy and Cæsarean section (say a conjugate $6\frac{1}{2}$ to $7\frac{1}{2}$ centimetres), and, on the other hand, between symphyseotomy, version, and high forceps (conjugate 8-9 centimetres). The only case which I have had that has come within the former limit was one on which I performed symphyseotomy, but was unable to extract a living child. In that case the conjugate was 6.5 centimetres, and it would have been better for the child if Cæsarean section had been performed.

In connection with this subject a recent case is of interest, in the first place as regards accurate pelvimetry, and in the second place as regards the choice of operation. In this case, a flat rachitic pelvis, the diagonal conjugate as measured in the ordinary way was 9.75 centimetres. Subtracting two centimetres for the change in height and angle of the symphysis the true conjugate was estimated to be 7.75 centimetres. I afterwards measured the pelvis with Hirst's pelvimeter and found the true conjugate a trifle over eight centimetres.

In this case the first child had been delivered after a difficult forceps operation; the head received severe compression, and the child lived but a few weeks. She first came to me in her second pregnancy two or three

weeks past term. The patient was only four feet six inches in height, and it was thought that perhaps symphyseotomy would be justifiable. We must in these cases bear in mind the size of the child in conjunction with the size of the pelvis. In this case it seemed apparent that the child was small, although pregnancy had been prolonged three weeks. If it had been a full-sized child, I have no doubt that symphyseotomy would have been necessary. The child was thought to be under-sized, labor was brought on, the forceps was applied and adjusted to the sides of the child's head, the right blade being behind and above the symphysis, and the left in front of and above the promontory. The occiput was towards the left. Using great care, I brought the head into the inlet of the pelvis, removed the instrument, and allowed delivery to occur spontaneously. The child was asphyxiated, but revived and is now doing well. Its weight was five pounds twelve ounces. The biparietal diameter measured eight centimetres, and the bitemporal a little over seven. It was a difficult forceps operation. It is clear, therefore, that when we make an accurate estimate of the size of the pelvis we must also bear in mind the size of the child. There is, however, nothing more difficult than to determine even approximately the size of the child's head by palpation or by any other means. Where we have to reach a conclusion between symphyseotomy and Cæsarean section, by taking into account the history of previous labors, an accurate estimation of the size of the pelvis, and an approximate estimate of the size of the child's head, the only way to reach a safe conclusion in the matter is to depend more upon the pelvic measurements than upon anything else. Where the conjugate is 8.5 or 9 centimetres, it seems to me that, if forceps and version are out of the question, no matter what the

history of previous deliveries may be, symphyseotomy could be successfully performed, and should be selected rather than Cæsarean section with its larger maternal mortality. I think that it would rarely be found that the child was too large to be drawn through a pelvis of that size with the symphysis open. When, however, the pelvis is more markedly contracted and the lower limits of symphyseotomy are approached,—viz., 6.5 to 7.5 centimetres,—the selection of Cæsarean section should be made for the greater degree of contraction, especially if the child were judged to be of average or large size. There might be other elements in the case to make it desirable to do Cæsarean section. A man who is a good operator might be inclined to do Cæsarean section, while one who looked upon symphyseotomy as an easier operation and one with a lower mortality would consider that operation more desirable. I am convinced, however, that in these perplexing problems the pelvic measurements are our most valuable guide.

DR. ROBERT P. HARRIS :

I think that the most interesting part about this case of Dr. Hirst's depends upon whether he was right or wrong in proposing Cæsarean section. I do not think that he made a mistake. I think that it is a mistake to allow a woman to judge for herself where it is possible to avoid it. The woman ran as much risk of losing her life in the process that she went through voluntarily as she would have done from Cæsarean section.

We have had 100 Cæsarean sections in the United States since the Sãnger operation was introduced, with a loss of thirty-eight women, which is a frightful mortality. When we look at the cases, we can readily see why some women have lived and others have died. The greatest obstacle to success is length of labor. When fourteen Cæsarean sections by the horns of animals caused the death of only ten women and seven children, it cannot be such a dangerous thing to operate before labor. The mortality in this country is less than in many other countries. In Great Britain for the last seven years it has been thirty-two per cent., while in the city of London it has reached forty per cent., although they appear to think that it has been less. There have been sixteen improved

Cæsarean sections in this city since January 1, 1888, with three deaths of women and two of children. Two of the deaths of women were foregone conclusions, and the other was the result of an accident. I do not see why there should be such great danger in Cæsarean section. I do not think that it lies so much in the operation as in the condition of the patient. If Dr. Hirst had been allowed to do a symphyseotomy when he wanted to, the child would no doubt have been delivered alive. If he had performed a Cæsarean section before labor, or directly after it commenced, the woman would not have had one-tenth of the suffering or danger that she did have. Because a woman can by the exercise of tremendous uterine force deliver a child barely alive, it does not prove that Cæsarean section would have been wrong. I was invited to be present at the Cæsarean section to be performed upon this woman, and I was surprised when I heard that she had delivered herself: but when I knew the circumstances of her delivery, I was not surprised. Had Dr. Hirst operated upon her after some hours of such labor, she would in all probability have died.

DR. GEORGE I. MCKELWAY :

Dr. Hirst is not the only operator who has made preparation to do Cæsarean section, and has had the woman deliver herself before the time set for operation. I know of two such cases. One was in the practice of one of the most eminent men in this city or in America. The other was in the practice of a younger man, since deceased. Each of these gentlemen invited a number of spectators to see the operation, but in each case the woman forestalled the operation by delivering herself the night before the day set for it.

I am in accord with Dr. Hirst as to the propriety of doing Cæsarean section where there is grave doubt as to the successful result of symphyseotomy. Dr. Harris has said that in sixteen Cæsarean sections in this city there have been three deaths. That is a high mortality, but he also says that two of the deaths were from causes not dependent on the operation. There is this reason for the difference between the mortality of symphyseotomy to-day and the mortality of Cæsarean section. Symphyseotomy has been done in the light of our present knowledge

of aseptic surgery, and only by skilled and aseptic operators. Cæsarean section has been performed by many men who probably had never before opened the abdomen. It would seem to me true that, at the hands of careful operators, with the knowledge that we have to-day of methods and precautions, the mortality of Cæsarean section should be very greatly reduced.

I have seen this operation done four times, and I cannot see where the excessive dangers lie. It seems a much easier and much less dangerous operation than the removal of large adherent pus-tubes. I believe that in the future, in proper hands, the operation will show a much less mortality than the present figures indicate.

DR. EUGENE P. BERNARDY:

The discussion so far seems to me more on the advisability of performing symphyseotomy than the Cæsarean operation or any answer to the question of Dr. Hirst.

In regard to symphyseotomy, I have expressed myself rather clearly in the County Medical Society, where I held that the field of the operation was extremely limited. Legault himself stated that anything below three inches called for Cæsarean section. Two things are to be taken into careful consideration in deciding upon what operation should be performed in a given case. First, the obtaining of accurate measurements of the pelvis, a thing I consider impossible; all measurements are only proximates. Secondly, the size of the child: in many of these deformed pelvic cases the child is abnormally large or the head preternaturally ossified. Symphyseotomy performed under such circumstances would prove a failure.

Last summer I was called in consultation in a case of labor: the patient had been in labor seventy-two hours; the face had presented in a posterior position. Version had been attempted, then craniotomy, both unsuccessfully. The patient had a generally-deformed pelvis. I performed Cæsarean section. The child, an abnormally large one, was delivered in five minutes. The woman was back in bed, and operation completed in twenty minutes. If symphyseotomy had been performed, as it was first intended, it would have been unsuccessful.

The second case, mother of ten children,

height of about five feet, extremely fat, labors always prolonged, lasting from two to four days; no instrumental interference, with the exception of the ninth child; high forceps delivery: well-marked rachitic pelvis. In January of this year I was called to see the patient, who was in labor, and had been in labor about three hours. This was about five o'clock A.M. The os was dilated and head presenting in left occipito-anterior position,—labor making no headway. I applied Wallace's forceps high up, but it was impossible to engage the head. Realizing I had a Cæsarean-section case to deal with I sent for Dr. Hirst and Dr. George Rex. On the arrival of Dr. Hirst, Tarnier's forceps was applied, but they slipped. Version was readily performed, and on pulling down the leg we realized that we had to deal with an abnormally-developed child. It was impossible to pull down the leg farther than the knee. Cæsarean section was decided upon. The extraction of the child was done within five minutes, and the entire operation I completed in twenty-five minutes. Here is a case in which the history pointed to symphyseotomy as the proper operation. Yet, had it been performed, it would have proved a failure as regards the extraction of the fetus.

I cannot feel but that Cæsarean section is the operation to be performed. We start with definite ideas and obtain definite results. I should hesitate considerably before performing symphyseotomy, unless I was positive that we had a small child to deal with. My experience is that in many instances it is not the woman that is entirely at fault, but that we have an abnormally-developed child.

DR. DANIEL LONGAKER:

I feel myself that there can be little chance of mistake in accepting the proposition which Dr. Hirst has made, that where there is any doubt about being able to deliver after division of the symphysis, there should be no hesitation in performing cæsarean section. I want to emphasize a point already referred to by several speakers in regard to the spontaneous delivery of this child. I think that is no argument in favor of a mistake in this case. I have been so frequently disappointed in a very similar way that I fully realize the difficulty in ascertaining the existence of disproportion between the head and the pelvis

I have seen a few instances where, with pelvises of about three inches, I have given a prognosis of difficult labor, and have suggested the induction of premature labor, and in more than one instance the patient has gone on to term; in one case the woman was delivered spontaneously by a midwife. The child was small, and there is no doubt, that at some future time, if the woman has a large child, there will be great difficulty. I think that with a child of average size there will be no error in assuming that below 6.5 centimetres Cæsarean section is indicated, and not symphyseotomy. While the estimation of the degree of disproportion between the foetal head and the pelvis is difficult, yet I think that prolonged practice in abdominal palpation, and the use of the conjoined method, will enable us to arrive at a reasonable degree of accuracy in the majority of cases.

DR. CHARLES P. NOBLE :

I did not hear the paper, but having been informed of its contents, and as the subject is one in which I am interested, I wish to make some remarks. I think that the next advance to be made in obstetrics is in the line of saving babies; not only to save their lives, but to have them born in a condition to become normal beings. It has been a blot on obstetrics in the past that often children, although born alive, have not been capable of normal development, on account of injuries to the head received in labor. They are "spoiled" babies. We know that many babies that are born alive die in a few hours or days after labor, because of injury to the head with hæmorrhage within the skull. These facts are well recognized by every one, and it seems to me that the next advance in obstetrics will be to deliver these children in such condition that they can grow up to be well-developed human beings. This improvement will come along the line of symphyseotomy and Cæsarean section. Of course, heretofore, when the mortality of Cæsarean section was supposed to be so terrible, it was only natural that the family physician, as well as the patient, should have looked upon it as a very serious matter, and that it should have been consented to only under the most extreme conditions. It seems to me that the experience of the last few years has demonstrated that the operation done at the proper

time before labor, or at the beginning of labor, and done *secundem artem*, is as nearly without danger as any major abdominal operation can be. There is a possibility that such cases may die, but every probability that they will get well, and 1 or 2 per cent. mortality should cover these cases. The same is true, in my opinion, of symphyseotomy; done in a proper way at a proper time, the mortality will practically be zero. That being the case, the question comes up whether or not we are justified in taking the risk of killing or injuring the child, which is as bad as killing, by trying to extract it through a pelvis which is too small to permit delivery in the ordinary way. I am satisfied that the next few years will show a revolution of sentiment in this matter. The induction of premature labor is an old operation, but I believe that symphyseotomy will largely supplant it.

With reference to the case reported, it is a typical illustration of what I have said. Here delivery *per vias naturales* was possible, and yet much more dangerous to both mother and child than either symphyseotomy or Cæsarean section. Of course, care and prudence must be exercised, lest operation be resorted to with undue frequency, and without just cause.

When one is dealing with a moderate degree of disproportion, it is evident that a mistake might be made. The argument to be drawn from that fact is that it would be wise to let such a woman go into labor, being careful to watch the patient closely, for if Cæsarean section is done in the first stage, or early in the second, the woman's chances have not been jeopardized, unless she has been infected by vaginal examination. I believe that in that way mistakes will be less apt to be made. After the woman goes into labor there is an opportunity for moulding to occur, and the chance of error is small. With reference to symphyseotomy the possibility of error is very slight, because symphyseotomy is not done until the second stage of labor has moulded the head, and the powers of nature have had an opportunity to demonstrate whether or not the head will come through.

What I have said concerning such borderline cases, where the operations of high forceps and version must be considered as against symphyseotomy and Cæsarean section, does not alter my opinion concerning the

desirability of performing Cæsarean section before labor, when the pelvic deformity is extreme,—two and three-quarters inches or less.

DR. GEORGE M. BOYD :

I wish to endorse the statement made by Dr. Noble with regard to the advisability in doubtful cases (if Cæsarean section is contemplated) of permitting the patient to go into labor before the operation is performed. I think that this is wise, because we cannot elect the operation on pelvic measurements alone, and it seems impossible to measure the size of the child's head. Therefore, in my opinion, it does not seem justifiable to do Cæsarean section before the woman falls in labor. I have had at the Philadelphia Lying-in Charity, during the last year, two or three cases of narrowing of the true conjugate sufficient to have indicated symphyseotomy.

I made careful measurements in contemplation of the operation, but fortunately the children were small, and the labors terminated successfully. The fact that we cannot depend upon the measurements of the true conjugate to decide the question, and the fact that it is almost impossible to estimate the size of the child's head, makes it essential, in my opinion, that where Cæsarean section is elected, to delay the operation as long as we are justified in so doing.

DR. HORACE FOX :

I should prefer to adopt the plan suggested by Dr. Hirst in the performing of Cæsarean section, when there was any doubt as to the delivering of the fetus by the natural way and by the maternal forces, in preference to the policy of waiting, as suggested by Drs. Noble and Boyd, as I think the waiting policy would materially jeopardize the lives of mother and child. 'Tis always better to err on the safe side, and very strongly does it appear to me that Cæsarean section, performed under the conditions named by Dr. Hirst, would be not only justifiable, but the safest procedure. When the patient has a sacro-pubic diameter of two and three-quarters inches or under, and the diameter of foetal presenting part is about normal, I think it would be entirely justifiable not to permit the woman to enter the active stage of labor, but

to perform Cæsarean section. Exceptive facts should not be considered as being justifiable in the relinquishing of general rules.

As regards symphyseotomy and premature labor, it is the same old question over again. Symphyseotomy is an excellent operation if restricted to the limits of its *demonstrable* use, but there is just where the trouble lies : it is not restricted. You cannot obtain from the partisan symphyseotomist the limits in which it is justifiable. Symphyseotomy is of decided use when the sacro-pubic diameter is between two and three-quarters and three and three-quarters inches, and *the woman is in the active stage of labor*. When the above pelvic contraction exists, and is discerned before the setting in of active labor, premature labor offers many advantages over symphyseotomy,—to wit : it is based on more accurate and scientific grounds, the risk to the mother and child is much less, and the results are not only much better, but they are much more satisfactory.

DR. H. A. SLOCUM :

There seems to be three points of view from which we can look at this matter,—induced labor, symphyseotomy, and Cæsarean section. The first is applicable only where the patient is seen one to four weeks before labor begins. A conjugate under six and seven-tenths centimetres admits of only one thing, and it is fairly safe to prepare for Cæsarean section. When we are brought in contact with a case *during* labor, the time has come to select between symphyseotomy and Cæsarean section.

I should have liked to have Dr. Hirst give his experience in the line which Dr. Fox has mentioned. Although he intimates that there are no hard-and-fast rules, yet there are limits above and below which it is not wise to do symphyseotomy. Below a certain diameter Cæsarean section should be preferred. Above a certain point symphyseotomy might be necessary and it might not be. It would have been of service if he had told us the points which appeal to his judgment and which he used in determining what he was going to do. The size of the pelvis and of the child's head are the main points to be considered. The size of the child's head is of great importance, and may be partly arrived at by noting its compressibility. This may be determined by the width of the sagittal

suture and the looseness of the parietal bones. I have found that a comparatively large head with poorly-developed bones will pass a small pelvis, whereas a head with better developed bones will not pass through a pelvis with larger diameters.

When we come to a case that has been long in labor, the question of symphyseotomy or Cæsarean section will, I think, be modified by what Dr. Harris has said with regard to the difference between the elective and the necessary Cæsarean operation, and the greater mortality of the latter. In spite of the long labor I should prefer Cæsarean section to symphyseotomy. The opportunity for drainage and for asepsis would, I think, be better, and if any such rupture as Dr. Hirst has mentioned occurred, there would be a possibility of closing it.

DR. BARTON COOKE HIRST :

As usual, Mr. President, the discussion has wandered rather far from the original theme. I asked for information in regard to the best rules for determining which was the proper operation—symphyseotomy or Cæsarean section—in cases near the border-line between the relative and absolute indication for the latter. Some of the gentlemen have discussed anything but that one subject. To touch first upon the extraneous matters that have been introduced, I was struck with what Dr. Noble said in his advocacy of symphyseotomy and Cæsarean section in preference to high and difficult forceps operation. His views are ours, of course, but the tone of his remarks suggested to my mind a danger greater than that which he wishes to see avoided. I can imagine no more dangerous adviser to the woman in labor than a man with strong surgical proclivities and an imperfect acquaintance with the ordinary obstetrical operations. He will be pretty certain to resort unnecessarily to the graver obstetrical operations once in a while. There is not the danger to the child in a high forceps operation that we are often told there is by men who seek opportunities for Cæsarean section and symphyseotomy. I have done many difficult forceps operations, but I have never seen a child in my care permanently disabled by brain injury. I am naturally not prejudiced against the graver operations when they are necessary. I have a personal experience in seven

Cæsarean sections and four symphyseotomies, —a larger experience in these two operations, I believe, than that of any other man in America. But I also know from experience what can be accomplished by forceps and by version.

Dr. Norris has struck the key-note of the discussion. I agree with him that the pelvic measurements are the most valuable factors in any case. The man who relies upon them alone will make few mistakes. But occasionally he will fall into grievous error. The case to which Dr. Bernardy has referred was particularly instructive in this respect. The woman had had nine children, and only one was delivered by the forceps, though the pelvis was markedly flat. In the face of that history, however, it would have been apparently a foolhardy procedure to have attempted at once a radical operation. This decided us against a serious operation at first. Forceps was tried therefore without avail. Then version was attempted. As soon as one foot was extracted, it was discovered that the obstruction was rather an enormous child than the contracted pelvis. The child weighed within one ounce of fifteen pounds. It was impossible even to engage the two thighs in the pelvis. When such a factor is present, the reduction of pelvic diameters becomes, of course, much more serious.

In answer to what Dr. Slocum asked with reference to the thoughts that influence us in our choice of operation, I would reply that an adequate answer to his inquiry would occupy a long time. It is impossible in short compass to give all the ideas that influence our decision in a case of difficult obstructed labor, but in a general way I should say we must be governed by accurate pelvic measurements and by our estimation of the size of the child. Basing our conclusions on these two principal factors, we must allow plenty of latitude in cases of doubt in order that we may deliver the child without mutilation. Again I repeat that our plan of action in these difficult cases is to choose in cases of reasonable doubt Cæsarean section in preference to symphyseotomy, if the labor occurs at term. Occasionally this rule will lead us into the error of doing Cæsarean section when symphyseotomy might have sufficed, but I believe that a man will make fewer bad mistakes by this plan than by resorting to symphyseotomy in doubtful

cases, and thereby running the risk of a failure to deliver the woman even after the symphysis is cut.

PRESENTATION OF SPECIMENS. BY DR.
BARTON C. HIRST.

Ovarian cysts, 2; cysts of the broad ligament, 3; malignant disease of the cervix, 3; soft myoma of the uterus; dermoid cyst with hair and bone.

This accumulation of specimens from cases in the Howard Hospital contains several of interest and importance. Among the malignant growths of the cervix is one specimen of ulceration in the left lateral vault of the vagina, leaving the cervical canal entirely unaffected. The ulceration opened the uterine artery, and the woman nearly bled to death a few days before the operation. I did an abdominal hysterectomy in this case, with exsection of the base of the left broad ligament. I was obliged to work alongside the ureter, and had I done a vaginal hysterectomy, I should surely have tied it or cut it.

This large dermoid cyst ruptured a few days before the operation, and its gelatinous contents were distributed throughout the

whole abdomen so tightly adherent that they could neither be washed nor wiped away. Within two hours after the operation the woman had developed septic peritonitis, and in twenty hours she was dead. I had never seen a dermoid cyst spontaneously rupture before, and I never saw such a rapidly-developed septic peritonitis. The tumor contents had begun to putrefy as soon as they were exposed to the atmosphere.

The two symmetrical cysts of the broad ligament, as large as good-sized oranges, were removed from a woman who had acquired atresia of the cervix and hæmatometra. I suspect they are two very large hydrosalpinxes that have unfolded the layers of the broad ligament. Macroscopically, however, there is nothing about them to suggest the tubes. The large, soft myoma is so exceedingly soft that I was sure the tumor was cystic, not only before the operation, but after the abdomen was opened and I had my fingers on it. It was removed by hysterectomy with extra-abdominal treatment of the stump. The woman has recovered.

Adjourned.

FRANK W. TALLEY,
Secretary.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

SOCIETY PROCEEDINGS.

New York Academy of Medicine—Section on Pædiatrics.

DR. JOSEPH E. WINTERS, CHAIRMAN.

Meeting of May 10, 1894.

SCROFULODERMA VERRUCOSA.

DR. CHARLES E. NAMMACK presented a child of 17 months, suffering from a very peculiar skin eruption. The child was markedly rachitic. On the face, neck, head, abdomen, and legs there was a profuse eruption, covered with a very thick soft scab. This scab was easily removed, and showed underneath quantities of pale granulations which bled readily but did not suppurate. In this regard the lesions differed materially from most scrofulous eruptions. The child had been under treatment for but five days with phosphorus and cod-liver oil, but had begun already to improve. The case was considered to be scrofuloderma verrucosa.

Dr. Roland G. Freeman read a paper entitled

PASTEURIZED MILK AS SUPPLIED BY THE STRAUS MILK DEPÔT.

This depôt was opened by Mr. Nathan Straus, in 1893, for the purpose of supplying pure fresh milk, raw or Pasteurized, to the poor. It was situated on a pier on East Thirteenth Street, adjacent to a crowded tenement region. Seats and awnings are arranged on the pier, and a small building with appliances for preserving and preparing the milk, and for distributing it. Three kinds of milk are issued,—raw, Pasteurized in eight-ounce bottles, and prepared milk, which consists of milk, sugar of milk, lime-water, and water. One and a half cents is paid for each bottle of Pasteurized milk. One cent for the prepared milk. Thirty-four thousand bottles were disposed of during the season.

The Pasteurizing was done according to Dr. Freeman's method, by placing a known quantity of milk in water of a given temperature, which would raise it to 167° F. Only one case of souring was known to have occurred during the season.

The subject for discussion was

THE MANAGEMENT OF THE BREAST-FED INFANT.

Dr. E. A. Tucker, physician to the Sloan Maternity Hospital, read a paper on

MANAGEMENT OF THE BREASTS AND NIPPLES BEFORE AND DURING THE PUERPERAL PERIOD.

He regarded the management of the nipples as by far the most important, for if they are kept in proper condition the breasts will take care of themselves. Special management is not demanded by healthy breasts and nipples before confinement, but of all things, astringents should not be used. If properly managed after confinement, but little trouble need be expected. The first and most important point is cleanliness. The child's mouth should be cleaned both before and after every nursing with a solution of boracic acid. The nipple should also be cleansed with the same solution and dusted with bismuth powder. The point of chief importance is to keep the nipple dry. It should not be macerated by allowing the child to nurse continuously. Cleanliness and dryness are of the greatest importance. The child should not be nursed at night. Experience of several thousand cases under close observation has led the writer to believe that even young infants are better and

healthier if not nursed between eleven o'clock at night and five in the morning.

When the nipples are very tender, a solution of cocaine may be demanded. The tenderness is removed most quickly by a weak solution of nitrate of silver. After repeated trials of all kinds of treatment, the writer has found the most successful treatment for cracked nipples, even cracks at the base, to be an eight-per-cent. solution of nitrate of silver, which should be applied directly to the raw surfaces after nursing, for one or two days. Simply dropping it on is not sufficient. It should be used until a thick strong scab has formed which protects the fissure. In rare cases cocaine must be applied before the silver. A nipple shield should then be used for a few days. The best form is that known as the Barclay shield. The glass part only is used, an ordinary firm nursing nipple being attached instead of the rubber which comes with the shield. This is removed and thoroughly cleansed after each nursing.

The best treatment for caked breasts is gentle massage, if the child is nursing. The rubbing should be done towards the nipple, but without expressing any milk. Gentle, firm massage is far more effectual than the breast-pump. If the mother is not nursing the child, the massage should be repeated every three hours and a firm binder applied in the interval. Free catharsis should be at the same time induced. Mastitis always develops from a sore nipple. It is to be treated by drainage and cold external applications. Drainage is effected by nursing and free catharsis. Massage should be avoided. When

abscess is unavoidable heat should be applied. If it should be desired to dry the milk drugs are superfluous. Diet, bandage, and massage are to be persistently employed; but one or two days of discomfort are to be expected. The binder should be broad and should be so employed as to cover every portion of the breasts.

Dr. Fruitnight approved the use of the binder and massage and condemned especially belladonna.

Dr. Baruch always used the boracic solution for the mouth and nipple before and after nursing, and he made a great effort to keep the nipple dry, as he believed these were the chief means of preventing cracking.

Dr. Jerome Walker read a paper on

THE DIET OF THE NURSING MOTHER.

He referred to the striking fact that among American women the power of nursing their children was rapidly diminishing. In many cases this was due to inability and not to disinclination. This inability was due frequently to bad management in feeding. Over-feeding is a common error. If the digestive organs were overworked indigestion would surely follow, which reduced the mother's strength and milk producing power. In general terms the food should be plain and digestible. All rich food should be avoided. Cow's milk is the best food known to improve the quantity and quality of breast milk. Essence of ginger may often be added to it to advantage. No one food alone will answer. Variety is extremely important. A general generous diet with plenty of solid food is the best. Too much liquid food should be avoided. Large quantities of gruel and soup

tend to upset the stomach more than to produce milk.

Malt liquors are apt to increase the quantity without effecting the quality favorably. In some cases they seem inclined to increase the fat of the mother with the effect of actually decreasing the milk. Malt extracts are far better than malt liquors.

Regular nursing is of supreme importance, and especially should night-nursing be prohibited. Improvement of the nerve power and rest will sometimes effect a surprising improvement in the quantity and quality of the milk. A nervous, feeble mother, dragged out by family cares, cannot properly nurse her child. The writer had frequently seen at the Coney Island Home, of which he was physician, a surprising improvement in the breast milk effected by a week of rest and removal from care. Out-of-door exercise is another most important point in management. The best tonics for the nursing mother are, as a rule, syrup of hyperphosphites and the non-astringent preparations of iron.

Dr. Tucker said that the practice at the Sloan Maternity was to put mothers on a milk diet during the first two days after confinement. During the next three days they were kept on "soft diet," consisting of milk, soup, oatmeal, bread and butter, tea, etc. After the sixth or seventh day they had three regular meals a day of plain digestible food, and three pints of milk a day. A pint was given in the forenoon, in the afternoon, and at bedtime in normal cases. Since the free use of milk in this way had been adopted very few mothers had lost the breast milk, as many cases had done before.

Dr. Fruitnight deprecated the use of malt liquor. He believed it had a bad effect on the child with very little good effect on the milk, and might be the beginning of the habit of intemperance.

Dr. J. Lewis Smith referred to the necessity for cleanliness of the nipples, and spoke of the use of properly-prepared food for children who were not able to nurse entirely.

Dr. Winters referred to the importance of exercise in the open air and rest in restoring an impaired milk flow. Rest at night was especially necessary. In some instances it was best to take the child entirely away from the mother at night. Excessive use of tea during lactation was the cause of much misery on the part of mother and infant. He believed that the fretfulness of many babies could be attributed to this cause.

Dr. Baruch believed that mental influences had as important an effect on the milk as the diet. He was inclined to believe that the nervous tension placed on the mother was one cause of the prevailing inability to nurse. He spoke strongly in favor of a mixed diet and against the use of slops. Nothing will render cow's milk so poor and innutritious as a diet of liquid and slops, and, in his opinion, the same was true in the case of the nursing mother.

Dr. L. Emmett Holt read a paper on the

SYMPTOMS OF INADEQUATE NURSING.

The lives of children are often jeopardized by vain efforts on the part of a conscientious mother to do what she is unable physically to do. It is important that the question of ability to nurse should be settled as soon as

possible, and that no time should be lost in vain efforts to accomplish the impossible. The first and most important symptom of inadequate nursing is loss in weight. The child should be weighed twice a week and its development watched. Sleep is irregular and disturbed; the stools are irregular and unhealthy in appearance. The child nurses long before it is satisfied. The symptoms during the later months are soft, flabby muscles, inability to sit alone and to stand at the proper time, and the early symptoms of rickets. The condition of the breasts and an examination of the milk also furnish valuable aid in determining the question of weaning. The milk may be excessively rich; the diet should then be reduced and daily exercise in the open air should be prescribed, and alcohol should be discontinued. The milk may become weak or scanty; this may be seen in an anæmic or delicate mother, and also in one who is careworn. The condition may often be so bad as to require immediate weaning. Every measure should be taken to improve the general condition of the mother and remove all nervous tension. The quantity only is sometimes at fault, though this is rare. In some cases the quantity is sufficient, but the quality is very poor. This condition is usually seen in women who take very large quantities of fluid and usually some alcohol. Instead of being a secretion of the glands, the milk is simply a transudation from the blood-vessels. The child should not be weaned thoughtlessly nor without careful consideration of every cause which might impair the milk. When the bad conditions cannot be corrected, weaning is strenuously in-

sisted on. On the whole, artificial feeding gives so much better results than poor nursing that it is best to stop nursing and begin artificial feeding rather than waste time in prolonged efforts to make the mother do the impossible.

Dr. William L. Stowell read a paper on

DIET AFTER WEANING.

He advocated in ordinary cases gradual weaning between the tenth

and twelfth months, with the substitution of cow's milk. Much uncertainty results from the varying quality of cow's milk. Milk obtained in the city varies as to its fat from seven to twenty per cent. It is, therefore, necessary to know at least approximately what the strength of the milk is; if very rich in fat, simple dilution is sufficient. As a rule, cream may be added. Among the cereals to be first taken oatmeal is one of the best.

ABSTRACTS FROM CURRENT LITERATURE.

Nephrectomy in Childhood.

MALCOLM (*British Medical Journal*, February 3, 1894) relates the case of a child, aged 23 months, of good family history and well developed, in whom at the age of one year a "full belly" was noticed. Gradually the abdominal enlargement took the form of a well-defined, elastic, oval, and scarcely-movable tumor. It filled the right loin, extending downward to the pelvis and just beyond the middle line below the navel. She was anæmic, but her general health was good, and there was nothing abnormal in the urine. The abdomen was opened through the right linea semilunaris, the kidney on the other side was examined and found healthy, and the tumor was removed through an incision in the posterior layer of the peritoneum, immediately to the outer side of the ascending colon, which passed in front of the growth. Great care was taken not to open the capsule of the kidney. The divided end of the

ureter was brought outside the skin and the wound closed without drainage. By the end of a week fever was gone. Fourteen months after the operation the child was reported in perfect health. The tumor measured six by four inches, and was found to be a malignant adenoma.

The records of nephrectomy for neoplasm in children showed an immediate mortality of over 50 per cent., while those that survived the operation had all died within a year, only one exception having been found in which the patient survived for eighteen months.

ADLER (*Deutsche medicinische Wochenschrift*, February 15, 1894) reports the following case in a child aged 3½ years: The enormous swelling of the abdomen was due to a fluid tumor which occupied nearly the whole of the abdomen. This tumor had been previously stitched to the abdominal wall and incised; 650 cubic

centimetres of clear fluid slightly albuminous was let off at the same time. A fistulous opening persisted, which discharged from 2000 to 3000 cubic centimetres of turbid fluid containing albumen, pus, and blood. As the boy passed per urethram 20 cubic centimetres of clear urine, absolutely normal, the right kidney was considered to be in a healthy state. Six months after tapping, nephrectomy was performed. The cyst was found to be exclusively extraperitoneal. The

tumor was with difficulty separated from the abdominal wall, and the resulting cavity plugged. The cavity grew less, and four weeks later only a small granulating surface remained. After the nephrectomy 600 cubic centimetres of normal urine were passed daily. The small amount of urine excreted by the sound kidney before the operation was accounted for by the amount excreted by the other kidney. The hydronephrosis was thought to be congenital.

Peripheral Paralysis following Varicella.

GAY (*British Medical Journal*, March 31, 1894) reports the following case in which paraplegia followed varicella. The child was 2 years and 5 months old, and had a good family history. Six and a half weeks before the patient was first seen he developed chicken-pox, being one of three children affected. Two weeks after the onset of the original disease, he was found one morning to be completely paralyzed in the lower extremities.

The affected members were flaccid and anæsthetic, and the reflexes, both deep and superficial, were abolished. The bladder and rectum were not involved. All evidence of brain-disease, diphtheria, and syphilis was lacking. The child's progress to complete recovery was rather slow, and his knee-jerks remained absent as long as he remained under observation,—two or three months,—at the end of which time he could walk fairly well.

Papoid in Diphtheria.

LARABEE (*New York Medical Journal*, March 17, 1894) states that he has obtained excellent results in diphtheria with papoid, used by insufflation. A fine and almost impalpable powder should be made by triturating one part of papoid with two parts of boric acid or bicarbonate of sodium. This powder is placed in the chamber of an insufflator; the tongue is then depressed by a spoon-handle, and the bulb of the insufflator is suddenly

compressed, and the powder is thickly deposited over the tonsils and fauces, every part being reached. This operation should be repeated at intervals of an hour, until the membrane becomes pultaceous, and is easily expectorated. Fluids should not be allowed for a few moments afterwards. The crying and resistance of the child only serves to better expose the pharynx, and make the distribution more thorough.

Eucalyptus Inunctions in Measles.

SHELLY (*Practitioner*, November, 1893) has employed eucalyptus inunctions in five of seventy-three cases of measles. The inunctions were inaugurated promptly and employed night and morning for three days, and subsequently once a day for the first week. An emulsion of eucalyptus was given internally, some of the fluid was placed in saucers about the room, and when cough was troublesome eucalyptus inhalations were

given. The favorable reports of other observers were not confirmed. There was unusual drowsiness. In all five the tongue was thickly coated, contrasting markedly with the tongues of the others under different treatment. The eruption was delayed in four of the cases, and in all the pyrexia was relatively prolonged. Convalescence was in all five cases more tardy than usual, and desquamation much more profuse.

Treatment of Empyema in Childhood.

SCHÜTZ (*Therapeutische Monatshefte*, J. 8, H. 2, p. 76) states that out of eighteen cases of empyema in children, treated by resection of one or more ribs, sixteen recovered, the remaining two being in children under one year of age. The drainage-tube, of considerable size, was allowed to remain, on an average of twenty-four days; the wound had healed in the course of an average period of forty-two days. Operation was undertaken as soon as diagnosis was made, as the mortality of expectant treatment had been eighty per cent. Left-sided

empyemata are particularly dangerous on account of the liability to the development of pericarditis. The resection was made as near as possible to the vertebral column. After the section of rib had been removed, the pleural sac was irrigated with a warm solution of boric acid, intended for the removal of the purulent contents rather than for disinfection. Siphonage is not practically applicable in the case of young children on account of the liability of the tube to slip out of place. The operation was invariably well borne.

The Electrical Treatment of Infantile Paralysis.

LEWIS JONES (*Lancet*, March 10, 1894) recently read a paper on the above subject before the Medical Society of London, in which he drew the following conclusions: (1) That it was important in every case of infantile paralysis which had lasted for more than four weeks to try electrical

treatment for six months or a year, if necessary. (2) That it was exceptional for the muscles to be so completely destroyed as to have no functional fibres left. (3) That a great improvement might be gained by a persevering stimulation of them by electricity. (4) That when the elec-

trical reaction was entirely absent or reduced to the lowest point some improvement might still be hoped for. (5) That even where the electrical reaction was not altered it was not good practice to leave the case to cure itself. (6) That the mechanical stimulation of electricity was superior to

rubbing and massage, but might with advantage be combined with these. (7) That the form of electricity was of less importance than the persevering use of it. (8) That the induction coil, used with or without the bath, was most easily arranged and was easiest for the mother or nurse to work.

Pathology of Scarlet Fever.

BERGÉ (*Union Medical and New England Medical Monthly*) considers scarlet fever a local infection due to streptococci. These organisms are cultivated in the crypts of the tonsils, and there secrete a toxine, the diffusion of which throughout the body produces the cutaneous and mucous eruptions. Puerperal and traumatic scarlatina result from local infection of the uterine surface, or various other mucous or cutaneous surfaces, by the streptococci. These conclu-

sions were based on the following facts: The scarlet fever eruption follows the affection of the tonsils; the existence of scarlet fever with eruption in which the tonsillitis and its specific complications are the only affections; the constancy of streptococci in the tonsillitis of scarlet fever; the relation of scarlet fever to puerperal infection; and, lastly, the ease with which the erythema-producing properties of the streptococci can be demonstrated.

Peripheral Neuritis produced by Arsenic.

RAILTON (*British Medical Journal*, 1-996, 1893) reports a case of chorea of three months' duration, which was cured in three weeks by the administration of thirteen and a half drachms of Fowler's solution. Then after discontinuing the arsenic she developed paresis, pains in the extremities, paræsthesia, and ataxy of the fingers. The urine contained a trace of albumin. The knee-jerks were lost; the muscles of the legs failed to respond to a faradic current, and yielded with

a galvanic current the reactions of degeneration. The writer also refers to nine other cases of chorea treated with fifteen-drop doses of Fowler's solution, three for a week, and the others for two weeks. Seven of them had vomiting, one diarrhœa, three herpes zoster, two erythema, and one peripheral neuritis. In all cases the chorea was cured. He believes that fifteen-drop doses of Fowler's solution is too much, if continued for more than a week.

A Case of Subdiaphragmatic Abscess.

MELTZER (*International klinische Rundschau*, No. 29, 1893) reports the case of a child, aged 26 months, with pneumonia of the right apex and very high fever. In a few days the fever fell by lysis, and remained normal for ten days. At this time pneumonia again developed in right lower lobe; the fever fell, five days later, by crisis. In the course of four days the child began again to have fever, and an empyema of the right side was diagnosed. An exploratory puncture was

made, and pus escaped. On the following day an Eslander's operation was made, but very little pus was found in the pleural cavity. By a closer examination the diaphragm was found pushed up into the pleural cavity, and fluctuation was detected. Only two of such cases have ever been described. The author thinks the cause of such a condition was infection of the lymph vessels of the diaphragm with subsequent abscess formation.

Treatment of Whooping-Cough.

UNRUH (*Jahrbuch für Kinderheilkunde*, Vol. xxxvi, parts 1 and 2, 1893) believes that the initial catarrh is the most important symptom of the disease to combat. If this is successfully done there is much less danger of fatal complications supervening. In young children, who may be unmanageable, he directs the inhalation of turpentine by means of a mask or cloth held before the face. In children who can be controlled, he advises the insufflation of quinine in powder form as of the very greatest value. He directs the use of one and a half grains of quinine once a day, and has not seen any intoxication from it, or tannic acid may be used when there is any objection to the

quinine. He believes that morphine, chloral, and such drugs, given internally do more harm than good, while the bromides are practically useless. The only internal medicant of much value is antipyrin. He gives one teaspoonful of a three-per-cent. or five-per-cent. solution every three hours. If the bronchial glands become involved, he applies a cold pack to the part, and advises the use of concentrated food. He has also seen good results from the inhalation of ten-per-cent. carbolic acid spray. Fresh air he considers of the greatest importance, but believes we should not send children affected with whooping-cough to resorts where there are healthy children, for fear of infecting the latter.

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ORIGINAL COMMUNICATIONS.

A Probable Case of Auto-infection, with some Remarks on the Bacteriological Origin of Puerperal Sepsis.¹

BY THOMAS D. DUNN, M.D.

As introductory to a few remarks on puerperal infection, I will relate the following case:

Mrs. H., aged 23, primipara, was confined May 1, 1893.

Until ten days before labor she seemed well and strong, but as the time approached she complained of marked weariness and dread of the result.

I was called at 10 A.M., irregular pains having begun about four hours previous. Vaginal examination showed no evidence of dilation of the os.

She was considerably worn and exhausted and complained excessively of the pains. Pulse rapid and rather feeble. She was ordered milk and whiskey and a laudanum injection.

She was again seen at 1 o'clock and ordered a hot bichloride vaginal douche and an enema of soap and water to secure an operation of bowels.

The pains were better borne and there was slight thinning of the cervix without perceptible dilation.

She was given ten grains of chloral and fifteen of bromide, to be repeated if necessary to allay suffering and secure rest. She was seen by my brother at 8 P.M. At 11 P.M. I returned, and the child was delivered naturally at 1 A.M., labor lasting nineteen hours. Chloroform sufficient to allay the severity of suffering was administered the last hour, but at no time was the anæsthesia complete. The birth-canal was not lacerated.

The child (a boy) weighed seven

¹ Read before the Obstetrical Society of Philadelphia, June 7, 1894.

pounds, and was apparently healthy. Placenta delivered spontaneously and was apparently entire. The patient complained of great weakness, pain, and uterine soreness out of all proportion to the severity of labor. The uterus was not firmly contracted. She was directed a glass of hot milk, a teaspoonful of ergot, and Dover's powder tablets as required.

Eleven hours after labor I was summoned, and found a temperature of $104\frac{3}{8}^{\circ}$ F., pulse 112; great restlessness and considerable pain. Uterus large, but no blood clots had passed. Hot water injections, free saline purgations, and quinine by mouth were prescribed. The patient then developed a typical case of septic infection, and died on the tenth day of the disease. On the sixth day she complained of pain in several joints, and on the seventh both wrists, right elbow, and knee were red, painful to motion and pressure, and on the eighth day large, fluctuating abscesses were present. There were no rigors, but the temperature, until two days before death, ranged from $102\frac{3}{8}^{\circ}$ F. to 105° F., the pulse from 100 to 140. Uterine soreness ceased after the second day, but at no time was there firm contraction.

Abdominal tympanites began on the fifth, the result of intestinal paralysis and not local or general peritonitis. The vagina (and on several occasions the uterus) was irrigated twice daily with creolin or bichloride solutions. On the sixth day the woman was etherized and uterus carefully explored and curetted, with the removal of some *débris*,—either fragments of placenta or a sloughing ulcer,—the latter sensation being given to the finger.

Under pressure at this place the uterine muscle seemed friable and soft, and fear was entertained of punching a hole into the peritoneal cavity.

The visit of my brother at 8 P.M.—five hours before delivery—was made directly from a case of diphtheria.

He had, however, thoroughly washed his hands with Johnson's antiseptic soap, and unusual vigilance, on this account, was used to sterilize the birth-canal both before and after delivery. It was carefully examined by speculum, but at no time could evidence of 'diphtheritic deposit be found.

The child was not put to the breast on account of the severe illness of the mother. On the first day it was exceedingly fretful; on second day it refused nourishment, and had high fever, temperature 103° F. On third day right elbow was swollen and red. Septic arthritis rapidly developed, and on the fourth day left elbow, both wrists, ankles, and left knee were involved. Several of the abscesses were opened and discharged a sero-sanguineous pus.

As much nourishment as possible was given by spoon, and whiskey and quinine were also freely administered. The child died on the sixth day.

This case presents many points of unusual clinical interest, and gave me more anxiety than any puerperal case since I began practice. It was my second death, the other being of a colored woman who died, the third day after delivery, from general peritonitis,—the result of rupture of a pyosalpinx at the time of the birth of child.

Unfortunately, no autopsy could be obtained on the subject of this re-

port, nor was any bacteriological study made of the discharges from the abscesses or lochia, and without these the report must be incomplete, and the case judged simply by the clinical history.

As to the source of the infection, whether from external sources or the result of so-called auto-infection, it is difficult to decide. At the onset of the trouble I was shocked with the possibility that the disease had been carried to the genital tract from the case of diphtheria, but in the light of subsequent developments this view became much less probable or even impossible. In the first place careful disinfection was resorted to both before and after delivery. The child was suffering from the constitutional effects of sepsis in ten hours after birth,—probably earlier. It is absolutely incredible that poison introduced five hours before birth could enter the circulation of the mother, and secondarily infect the child and develop into a septic arthritis so quickly. The mother's fever came on in six hours after confinement, and it seems impossible that absorption should take place in that time and produce such marked constitutional disturbances. It is contrary to the history of wound infection and the development of puerperal fever.

Obstetricians, who have had large experience in puerperal septicæmia, limit the initial chill to the fifth day after delivery, the majority of mild cases develop in three days. In grave cases the period of incubation is shorter, but seldom under thirty-six hours. Moreover, there is in this case the history of great weariness ten days before labor, an unusual sense of alarm, the constant suffering from

uterine pains, and the great distress afterwards, so unnatural in first confinements, together with the condition of the endometrium described.

All these symptoms favor the belief that there was present some disease of the endometrium from which both mother and child were affected before delivery. The subject of puerperal infection has been before the obstetrical world for some time. With the increase of our knowledge of the bacteriological origin of sup-puration and septic fever, it is generally concluded that puerperal fever is due to pus-producing micro-organisms. The study of micro-organisms in connection with suppurative processes and septic disturbances has shown that puerperal diseases are not to be classed as different and separate affections; they are due to the same micro-organisms that cause wound-infection. In the language of Williams, of Johns Hopkins, "Puerperal infection is wound-infection."

Here, as in surgical diseases, the most common micro-organism is the streptococcus pyogenes.

Mayrhofer, in 1865, was the first to announce the discovery of chains of micrococci in various organs of women dead from puerperal fever. This was long before modern methods of isolating bacteria. His observations were subsequently confirmed by Rindfleisch, Coze, Klebs, Recklinghausen, Orth, Dolins, and others.

Widal, in a most carefully-prepared article, has shown that the micro-organisms were present in different manifestations of puerperal infection, as puerperal ulcers, endometritis, parametritis, peritonitis, septicæmia, pyæmia, and phlegmasia alba dolens.

The streptococcus, as in wound-in-

fection, is not the only cause of puerperal infection, but is the cause of the severer forms. Briegar was first to demonstrate that the staphylococcus might cause fatal puerperal infection, and his results have been corroborated by Fehling and Döderlein. The latter found both organisms present in an epidemic in Leipzig in 1887.

In certain cases the organisms of putrefaction produce a puerperal infection, which is the result of the absorption of poisonous ptomaines, developed during the life of the micro-organisms.

To this condition Matthew Duncan has applied the name of sapræmia. It is the belief of many bacteriologists that this does not occur as often as is generally supposed.

Gonococci have also been found to produce mild forms of puerperal, febrile disturbances.

Krönig reported a year ago nine cases in which there was a puerperal fever due to this micro-organism, which was found in vagina and uterine cavity.

I have myself seen four cases in which there was a muco-purulent discharge associated with pain and fever, and though the presence of gonococci was not looked for in the secretions, my suspicions were confirmed by the existence of gonorrhœa in the husband. As in Krönig's cases, these all recovered with the usual treatment.

Von Frangen has recently reported a case of mild puerperal infection in which he found a pure culture of colon bacillus in the uterus; other organisms were not present. It is not surprising that an occasional case of this kind should occur, owing to the frequency of rectal discharge dur-

ing labor, and its proximity to the birth-canal.

In the *German Medical Weekly* for April 6, 1893, Heyse has reported a fatal case of puerperal tetanus, in which he found, during life, the tetanus bacilli in the cervical secretion. These bacilli were also found in the cracks between the boards of the floor where the woman was confined, and were, in all probability, introduced into the genital tract during labor. It will thus be seen that a variety of micro-organisms may produce puerperal infection, and it will not be doubted that in a large majority of cases they are carried into the genital tract on the hands or instruments of the accoucheur, and he, as well as the surgeon, has to deal with wound-infection. The most important question which has been debated for some time, and often with the display of much feeling, is whether this is the only cause of infection, whether infection may come from organisms present in the genital canal or uterus previous to examination. In other words, is infection always from external causes, the fault of the attendant, or sometimes the result of poisons previously introduced?

Before a bacterial study of the genital secretions was made, it was observed that the measures used by surgeons to prevent wound-infection were not so successful in puerperal cases.

Strictly speaking, there can be no such thing as an auto-infection as conceived by Senn, Leveris, Ahlfeld, and others. The former says, "In rare cases the decomposed organic animal material which causes child-bed fever, when absorbed, is produced within the borders of the affected

organism; these are cases of auto-infection and cannot all be prevented." It is now known that infection is due to micro-organisms, and they must come from without. There is some difference of opinion as to whether pathogenic organisms can remain in a latent state in the birth-canal during pregnancy and be absorbed into the wounds following labor, producing puerperal infection.

Gönnér, Thomm, and Samschein, the opponents of auto-infection, claim that while bacteria are present in the vagina and uterus in healthy women, they are not pus-producing micro-organisms. The great majority of investigators, however, believe that the vaginal secretions frequently contain pathogenic micro-organisms.

Steffeck has examined the vaginal secretions in twenty-nine pregnant women, and found in 41 per cent. pus-producing bacteria, which was proved by inoculation in animals. His observations have been confirmed by Winter, Döderlein, Widel, and Witte.

From these experiments he believes in the possibility of auto-infection, and advocates thorough disinfection before labor. Döderlein, a distinguished bacteriologist as well as obstetrician, in his work on vaginal secretions, based on the examination of 195 cases, shows a difference in these secretions, and points out two varieties,—the normal and pathological.

The normal secretion is a whitish material, with the consistency of clotted milk and acid reaction. It contains a long bacillus, a few epithelial cells, and sometimes a few yeast cells.

The pathological secretion usually has a yellowish or yellowish-green

color, is of creamy consistency, and often contains gas bubbles and tough mucus. The reaction is sometimes faintly acid, frequently neutral or alkaline. The microscope shows a marked difference from the normal, the pathological containing both bacilli and cocci, leucocytes and epithelial cells. Of Döderlein's 195 cases the secretion was normal in 53 per cent., and pathological in 47 per cent. Inoculations of animals with the normal vaginal secretions were harmless, while of animals inoculated with pathological secretions (10 per cent. of which contained the streptococcus pyogenes) one-half were affected. He accounts for the difference in results of former investigators by the secretions used,—the negative results being obtained from normal cases.

Williams, of Johns Hopkins, and Michel, of the University of Maryland, have recently examined the vaginal secretions of fifteen pregnant women, and their results substantially confirm those of Döderlein. In four cases the secretion was normal. In two cases were found vaginal bacilli and unidentified cocci. In one no growth appeared on their media. In eight cases they found pus-producing organisms.

It thus appears that auto-infection is possible, but if (according to Steffeck's statistics) the vaginas of 41 per cent. of pregnant women contain pyogenic organisms and developed septicæmia, the death-rate would be enormous. The circumstances under which auto-infection occurs from these organisms are not known. And here, as in surgery, where there are pathogenic organisms present, comparatively few wounds become infected seriously.

But many of the cases of slight elevation of temperature in the normal puerperium, though no alarming sepsis takes place, may arise from this source of infection. No doubt, as stated by Williams, the flow of amniotic fluid, the passage of the child, and afterwards the placenta, carry away much of the pathological secretion from the birth-canal, greatly reducing the danger of auto-infection.

Williams thus holds that auto-infection is possible in a decided proportion of cases, but its occurrence is comparatively rare.

Robert Barnes, in a recent paper before the British Medical Association, prefers the name endogenetic infection, and is of the opinion that it is a frequent origin of puerperal fever, and that it may result from some abnormal condition of the system; but most authorities agree that there cannot be septic fever

without pus-producing micro-organisms.

Duncan, of Toronto,¹ believes that the term auto-infection should be rejected; being non-existent, it should not be used as a shelter for the obstetrician. It occurs to me that, as long as it has been indisputably demonstrated that streptococci are found in the birth-canal of a percentage of pregnant women, infection is possible from that source, and a practitioner who has a case of puerperal sepsis should not of necessity be condemned for carrying the poison to his patient. The admission of the possibility of auto-infection, however, is dangerous, for it may be used as a conscience-salve by the careless and neglectful obstetrician.

That such a danger is possible is the strongest argument in favor of the prophylactic douche, particularly in hospital practice and among the poor and uncleanly.

Extirpation of the Uterus in Diseases of the Adnexa.²

BY J. M. BALDY, M.D.,

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THE questions involved in this subject are not many, and I think may be determined easily. As in all matters when the agitation of the subject first began, many of the points were obscured for the want of practical experience on which to base observation. This objection has now in a measure

disappeared, and practice has fully borne out what was at first anticipated and predicted from a partially theoretical stand-point. The discussion of the extirpation of the uterus in diseases of the adnexa will be confined principally to the pelvic inflammatory diseases, other conditions being considered secondarily, for the reason that this procedure will be called for mostly in the former class of affections.

¹ Medical News, March, 1894.

² Abstract of paper read before the American Gynecological Society, Washington, May 29, 1894.

Certain general considerations arise in this connection :

Is the uterus essential or useful after the ovaries have been removed? If not—

(1) Are all patients cured after an operation requiring double ovariectomy?

(2) Are patients cured after hysterectomy when double ovariectomy has failed?

(3) Does the operation of hysterectomy increase the mortality above that of double ovariectomy?

(4) Is the retention of the uterus of any disadvantage or danger to the patient?

Is the Uterus Essential or Useful after the Ovaries have been removed?

—The uterus has but one use in the body, that of containing and developing the human embryo. In the loss of both ovaries it seems superfluous to argue that the further necessity for this organ has departed, and together with the necessity its usefulness. It is not true, as has been held, that the womb has anything to do with those peculiarities which go to make up the womanhood of the woman. This rests solely in the ovaries. Nor has this organ anything to do with the integrity or support of the vaginal vault. If any support is given to the vagina from above, it is from the broad ligaments, but their integrity is destroyed by the double ovariectomy. As far as the cervix being the key-stone to the vagina is concerned, there is no necessity for the removal of this structure. The uterus may be extirpated by an amputation so low down as to be practically a complete removal of this structure, and yet leave the vaginal portion of the cervix intact. Thus

the relation of the vagina and cervix remain unchanged, and the pelvic floor with its attachments are relieved of the weight imposed upon them by a useless and probably diseased uterus. I find that there is less sagging of the pelvic floor in cases where the uterus has been removed than where simply a double ovariectomy has been performed.

(1) *Are all Patients cured after an Operation requiring Double Ovariectomy?*—There is no gynaecologist who is not familiar with the patient who, after a double ovariectomy, returns month after month suffering with pain, metrorrhagia, or discharges of muco-purulent matter from the uterus. The subject requires no elaborate discussion, and the conclusion will, with little doubt, be conceded by all.

Are Patients cured after Hysterectomy when Double Ovariectomy has failed?—In my paper¹ two cases were reported, in which the uterus had been removed subsequent to a simple extirpation of the appendages. After the primary operation these patients had continued to suffer from leucorrhœal discharges, bleeding, and pain. The secondary operations for removal of the uteri proved that the appendages had been thoroughly and completely extirpated at the first operation, and that no such cause as incomplete removal existed to account for the continued suffering. The removal of the uterus in both cases cured the patients, and at the present writing they both remain in good health. Two other operations have been performed since that time with like results.

¹ Read before the Philadelphia Obstetrical Society October, 5 1893, ANNALS OF GYNÆCOLOGY AND PÆDIATRY, November, 1893.

It is contended that proper uterine treatment will bring about the cure without the necessity of removing the womb. Many attempts have been made in this direction with failure in many instances. The methods adopted have been local applications (intra-vaginal and intrauterine) and curettage with gauze packing of the uterine cavity. The first patient upon whom hysterectomy was performed in pursuance of this plan had been submitted to the primary operation of double ovariectomy a year or more previously, and the second operation was only undertaken after we were both worn out and disgusted with the lack of results from local treatment.

Does the Operation of Hysterectomy increase the Mortality above that of Double Ovariectomy?—I shall be obliged to answer this question from my own work, as no fair comparison can be made of the work of any two men in different operations. In the paper above mentioned eight cases are reported upon whom this operation had been performed. Fourteen additional ones may now be included, making in all twenty-two operations. Of this number all recovered from the operation, and the great majority have been cured. My highest mortality in the past has always followed removal of the appendages in this same class of patients. At no time have I been able to pick out anything like twenty-two successive successful double ovariectomies in cases of the same character as those upon whom I have found it advisable to perform hysterectomy. Not only has hysterectomy lessened the mortality very markedly in my hands, but it has rendered the convalescence infinitely smoother, easier, and more satisfactory.

Is the Retention of the Uterus of any Disadvantage or Danger to the Patient?—Not infrequently the womb bleeds and gives rise to muco-purulent discharges indefinitely after removal of the appendages. If it be argued that in a proportion of such cases the removal of the appendages has not been sufficiently complete, one reason has at once been advanced in favor of hysterectomy; for if this operation be the one of choice, there can be no such result as incomplete removal of the appendages. If, on the other hand, these symptoms can be cured by the removal of the uterus, then there is at once an additional and unanswerable reason established for the performance of the hysterectomy. That these symptoms can at times be so cured, at least in certain cases, has been proved by the facts already quoted from my work, as well as by the experience of other surgeons. The fact that the pelvic floor is more apt to sink to a lower level after the removal of the appendages than after a hysterectomy, a fact which has been observed by other surgeons as well as by myself, is a further argument in favor of the complete operation.

It is contended that about 20 per cent. of all cases of pus-tubes are of tubercular origin. It is also well known that it is, in a large proportion of such cases, impossible to decide this question at the time of the operation by the gross appearance of the parts concerned. Would any surgeon wish to leave the uterus in any case of known tubercular disease of the appendages in the face of the large proportion of uteri which are known to be infected in such cases? It would seem that this was an additional strong reason for the hysterectomy.

The elimination of any fear of future malignancy in the uterus is by no means a small consideration.

These questions being all settled in the affirmative, it follows, as a matter of course, that hysterectomy is the operation of choice over double ovariectomy in a certain percentage of the class of cases under consideration. It remains then to determine in what cases to choose this operation.

It is well known that in pelvic inflammation the disease first affects the mucous membrane lining the womb, and secondarily invades the Fallopian tubes and the pelvic peritoneum. In many cases not only is the endometrium affected, but the inflammatory products invade the deeper structures which go to make up the uterine walls. These infiltrates undergo the same changes as do the same elements in the walls of the Fallopian tubes, whether it be suppuration or partial organization, in either case the process is apt to become a permanent one. The ease with which a ligature cuts through uterine tissue, when applied at the cornu in cases of pus-tubes, and the large hard uteri so often found in conjunction with chronic interstitial salpingitis are well known demonstrations of the truth of this.

It must not be understood that the removal of the uterus, together with the Fallopian tubes and ovaries, is recommended in all cases of pelvic inflammatory disease. I am forced to dissent at this point from the views of some other surgeons, with whose opinions, in other respects, I am thoroughly in accord. In many cases the uterus, possibly on account of its anatomical relations which are so favorable to good drainage, has suc-

ceeded in throwing off the original infection and is comparatively healthy, if not entirely so. Under such circumstances hysterectomy is not indicated. But where an abdominal section has been performed for the removal of the uterine appendages and the womb is found enlarged and diseased, especially if it has been surrounded by extensive adhesions, the destruction of which leaves large areas of denuded peritoneum, hysterectomy should be the operation of choice. Even when the uterus is not greatly diseased, if during the course of the operation it be largely denuded of its peritoneal covering it is best to complete the operation by its removal. The only objection which could be urged against this procedure is an increased mortality, but since this has been proved fallacious, opposition from any stand-point must necessarily be withdrawn. It is freely granted that in accepting this practice uteri will often be removed which might safely have been left behind. Even in the face of this possibility the procedure is fully justified, in view of the possibility of future harm on the one hand and the certainty of no extra risks on the other. The decision pro or con is at times a difficult one at the operation, in which case the patient should be given the benefit of the doubt and the uterus should be removed.

The same principles which obtain in this class of cases hold good in all other diseases, when it has been decided that both ovaries must be removed.

Where the womb itself is greatly enlarged, infiltrated, or diseased, it is a proper subject for removal.

Where there is any good reason for

believing that this organ will in future become the seat of disease, it may with propriety be extirpated.

Where its removal will facilitate an operation or give greater security against hæmorrhage, it is justifiable to extirpate the organ.

In all cases it is, of course, assumed that both ovaries must of necessity be sacrificed. Except in the presence of malignant or tubercular disease the womb should never be disturbed if even a portion of one ovary and a Fallopian tube can be preserved. Nor is an operation to be extended to the performance of hysterectomy where the double ovariectomy will even temporarily answer the purpose, should the patient be in such condition that the prolonged manipulation might render the result of a given case doubtful. Common sense must be used in the application of this principle as in all other surgical procedures.

Hysterectomy being determined upon, especially in pelvic inflammatory cases, how should the operation be performed.

French surgeons have for some time been removing the uterus by way of the vagina. In doing so no effort has been made to remove the appendages, this being purely a secondary consideration. As a matter

of fact it would be highly dangerous in some cases to attempt their removal by this source. In America, with rare exceptions, the abdominal method has been the one of choice, and is to be preferred for the reason,—

(1) That all parts may be exposed to the eye as well as to the touch, and hence greater accuracy and security obtained.

(2) All intestinal injuries may be readily discovered and corrected.

(3) The adnexa may be completely removed together with the womb (a very great desideratum).

(4) All wounds may be closed, denuded surfaces often covered over with peritoneum, and in many cases drainage avoided. American operators have kept the mortality by this method as low, or even lower, than the French surgeons have by the vaginal method, with the additional advantage of making a complete removal of diseased structures, and they are therefore more secure in the chances of better results. The only possible condition in which vaginal hysterectomy may be preferable is in those cases where there is a large pelvic abscess accompanied with dense and extensive intestinal adhesions, which it would be impossible or highly dangerous to the intestines to separate.

Hysterectomy in Bilateral Disease of the Appendages.¹

BY FLORIAN KRUG, M.D.,
NEW YORK.

ALTHOUGH the new application of the Hegar-Batley operation to the treatment of purulent diseases of the adnexa seemed to us to be about all that we could expect, yet in the light of the surgery of to-day, and a more precise analysis of the results of this further differentiation of the original operation, we are brought to the decision of considering it wholly unsatisfactory. Primarily, it seemed to be health, as well as life-giving, but although the patients were cured of the grosser and more acute lesions and symptoms, yet to-day we find that the ultimate results have not consummated our hopeful expectations. And although we are not content with these ultimate results, yet must we consider them glorious compared with the treatment of neglect, based upon the cellulitis theory of the cause of these lesions. Life has been saved, to be sure, but not so often has health been restored as we expected, and as might be desired. The cause of this failure to symptomatically cure these patients lies in an extension of the inflammatory conditions beyond the grosser lesions made manifest by our coeliotomy. Did the removal of these gross but secondary lesions cut short the symptoms, or did we not by their removal leave the essential and primary cause of all the trouble, together with the less apparent, but more fruitful source of suffering, the

inflamed uterus and its nerve centres? Unhesitatingly answer, Yes.

We are now in a position to justly, as well as accurately, estimate the benefits derived from the old operation of removal of bilateral purulent disease of the appendages; and we are also able to say in how far that operation has failed. Careful observation devoted to cases through some time demonstrates that while pathologically they are cured, but few are symptomatically relieved. The cause of the failure to accomplish all that might be desired, so far as the subject of the operation is concerned, lies in our failure to remove the original and persisting source of infection. The question has simply resolved itself into this: that either the cases operated on by those who claim that the uterus, when left, is not a cause of further symptoms and may be rendered innocuous by mild treatment, are not thus cured, or else gentlemen making these statements have submitted to their skill the most simple cases, as a rule, and in the severe ones have failed to observe the results of their work. The cause of continuance of distressing symptoms is the primary lesion in the diseased uterus; the effect of the premature and artificial menopause upon the sympathetics; the irregular and delayed involution of the uterus; the adhesions formed between the intestines and raw surfaces in the pelvis; the possibility of repeated reinfections

¹ Abstract of paper read before the American Gynecological Society, Washington, May 29, 1894.

of the uterus; the possibility of ventral hernia, owing to the different methods of drainage; and many other lesser lesions, together with malpositions natural to the uterus repeatedly inflamed and deprived of its natural supports. Broadly stated, a continuance of the symptoms is due to a retention of the inflamed uterus, which is the primary seat and original cause of every lesion found in these cases, and the effects of its continued influence upon the pelvis, lymphatics, and nerves.

Observations of the results of my own operations and those obtained by the old method made me eager to grasp any possibility of obtaining better, more speedy, and more permanent relief for these women from the one great subjective symptom,—*pain*.

In 1890, having removed many cancerous uteri *per vaginam* with absolutely uncomplicated recoveries, a case presented with bilateral suppurative disease of the adnexa and a large retroflexed uterus. Curettage, salpingo-oöphorectomy, and hysteror-rhaphy were contemplated; but the excellent results obtained from removal of the uterus and adnexa in cancerous cases suggested to me that, inasmuch as the woman had to be castrated, why should I not remove the diseased uterus also. This I did. The remote, as well as the immediate, result was perfect. The severe criticism following the report of this case, and the timidity incident to my conscious fallibility, forced me to resume the old routine and generally-practised operation. But this one case had left upon my mind an impression and a brilliant picture. During this period of my relapse from the proper pro-

cedure in these simple suppurative cases, I removed many fibroids having purulent adnexa. The contrast was unavoidable between the results obtained by ablation of the fibroid uterus with bilateral suppurative tubal disease and those which followed removal of these tubes and retention of the inflamed uterus. In both classes the uteri were diseased; and the belief came to me that the difference in immediate, as well as remote, results was due, *must be due*, to the retained uterus in the latter class.

In September, 1892, I again removed a uterus, associated with bilateral suppurative tubo-ovarian disease, selecting the abdominal route rather than the vaginal for reasons to be presently stated. At this time I was yet undecided as to a routine practice in these cases; and while adopting the old method in some, and the more radical in others, I was enabled to compare the result in the two classes. And this contrast was made more marked by the fact that cases presented themselves to me on whom I had previously removed bilateral suppurating adnexa, with a persistence of most distressing symptoms, and who were entirely relieved of all symptoms when I, by a secondary operation, removed the uterus.

Such a study substantiated me in the belief, and confirmed me in the method I now employ, of, in every case demanding the sacrifice of both adnexa, removing the uterus also. The following reasons appeal to me why the uterus should be removed in these cases:

The uterus without the adnexa is a useless organ, and devoid of physiological function.

It is not innocuous; it is, on the

contrary, positively a diseased and, therefore, harmful organ.

Histologically, the tubes are but parts of the uterus, and their removal is partial amputation of the uterus; therefore, why should we not go a step further, and remove the rest of the diseased organ?

Is it conceivable—clinically, is it a fact—that those projections of uterine tissue which we call the tubes are *alone* diseased, and not the rest of the uterus?

This question is pertinent and forceful when it is known that the primary seat of the disease is the uterine cavity, and that the tubes are involved by direct continuity of tissue. Although in the last few years the indications for drainage have, under a more perfect technique, become limited to a very small class of cases, still there are those which demand drainage in a *surgical* sense. What route for this drainage more proper than the one Nature has provided for the lochia and other physiological discharges?

Careful observation and questioning of my patients have elicited the fact that the artificial menopause is much easier for the woman who has had her uterus removed, whether for cancer, for fibroid, or when associated with disease of the adnexa, than when the tubes alone are removed. The explanation of this lies in the fact that when we remove the uterus we remove the great mass of ganglionic tissue in the organ.

Did this operation involve an increased danger to the woman, some objection might be made to it; but

it does not. On the contrary, it lessens the mortality in the hands of those familiar with the technique of hysterectomy. In its performance it takes no longer than the admittedly proper procedure of curettage preceding a *cœliotomy*, and some less time than to attach a proper drain where drainage is demanded, or to do a hysterorrhaphy. And when we consider the possible necessity for a secondary *cœliotomy* to remove a uterus for persistence of symptoms, or to close a hernia following drainage, the argument for the complete piece of work in the first instance becomes still more powerful. My objection to the vaginal route in hysterectomy is that when once begun it must be completed, and the operation does not admit of a clearer estimate of the disease of one or the other adnexa, and possibly some conservative procedure.

Were I addressing a society of those not skilled in abdominal surgery, I might not dare to advocate for their adoption this complete operation, but would advise some palliative procedure. But my apparent boldness is born, not of a disregard for what the operation embodies, but belief in a just and proper estimate of the completeness of the old method, and the completeness of this. That I may not be misunderstood, in closing I will emphasize the fact that I am dealing only and solely with those lesions of the adnexa which unquestionably demand the removal of the adnexa where both are the seat of disease precluding the possibility of cure by all conservative methods.

Some Remarks of Total Extirpation of the Fibroid Uterus: Illustrative Cases.¹

BY RUFUS B. HALL,

CINCINNATI, O.,

*Professor of Clinical Gynecology at Miami Medical College, and Gynecologist
at Presbyterian Hospital.*

THE subject of fibroid tumor of the uterus is too broad to be considered in all its aspects, in the time allotted, before this Society. I have, therefore, thought it advisable to speak of but two phases of the subject: first, what cases require operation; second, methods of operating.

Clinical experience demonstrates that only a small percentage of those suffering from fibroids require operative interference for relief. This is so well known that the profession at large have come to regard them as purely innocent growths. This is true in the majority of cases. My experience, based upon more than 200 carefully-recorded cases, justifies me in saying that the majority of women from 36 to 45 years of age, suffering from fibroid tumors, do not require operative interference, but this fact increases our responsibility in determining early the cases really requiring operation.

A great many women who are the subjects of fibroid tumor suffer no more inconvenience than a slight pain preceding and during the menstrual period, which is not excessive or unduly prolonged. They suffer but little, if any, from pressure symptoms or peritonitis, and the tumor only an-

noys them because they are conscious of its presence, by manual manipulation, or from information given them by their physician. As long as the patient remains comfortable, and her general health is not interfered with by pressure or loss of blood, she certainly ought not to be subjected to an operation.

The chief symptoms and secondary diseases of cases requiring operative interference are hæmorrhage, pain, cystitis, peritonitis, and pressure, causing temporary intestinal obstruction. These cases, when they do not yield readily to internal medication, combined with thorough curetting, the patient being put under good hygienic surroundings, are to be looked upon with suspicion, and the future progress of the case watched with unusual care and interest. Experience leads me to believe it is out of this latter number, where the symptoms cannot be easily controlled, that almost all of the operative cases come. I do not mean by this statement that all of these cases should be at once subjected to the radical operation of hysterectomy, but I wish to emphasize the opinion that these cases should be carefully watched. It is not unusual to have a case referred for operation, where there has been severe and frequent hæmorrhage with metror-

¹ A paper read before the Ohio State Medical Society, Zanesville, May, 1874.

rhagia, lasting from ten to fifteen days each month, for a number of years. To say that these patients are in the most unpromising condition for such a radical operation is to repeat what you all know. They are exsanguinated to an extreme degree.

Three cases operated upon by me within the past year, although still able to walk, had lost such large quantities of blood that the act of rising to the feet caused severe vertigo. They suffered but little pain at any time, but had been confirmed invalids for years. They had had all kinds of internal medication, combined with electricity before they were referred to me, with the result of only lessening the hæmorrhage, not controlling it. These cases illustrate in a forcible manner the point I wish to emphasize,—that is, if hæmorrhagia and metrorrhagia cannot be controlled within a few months by careful medication, that case should be referred for operation, and not be permitted to become so enfeebled as to make the result of the operation problematical. In other words, if once a patient becomes a bleeder she nearly always continues to be a bleeder, and there is no permanent relief except by operation.

There is another class of cases in which the most prominent symptom is not hæmorrhage, but pain from pressure of the tumor. A tumor the size of a cocoanut, which has become adherent in the pelvis from inflammatory exudation, may cause intense suffering, and a great number of reflex symptoms which demand relief. In support of this I could cite many instances, of which the following is a fair illustration.

Miss M., aged 40, referred by Dr.

Rhu, of Marion, O., was known to have had a fibroid tumor for more than three years. For one year before my visit she observed that she was growing more and more incapacitated for walking. When she attempted to walk she suffered from a sense of fullness in the pelvis, and pain in the legs and head. Much of the time she was practically disabled so far as locomotion was concerned. She could not walk across the street without causing pain in the legs, which was at once reflected to the head, so that she suffered greater pain in the head than in any other part of the body.

I saw the case in consultation with her physician, March 12, 1893, at which time she was just recovering from a sharp attack of peritonitis. On examination, I found the tumor occupying the entire space in the pelvis, with a large nodule above and to the left side, wedged down, firmly fixed by adhesions, and causing great pressure. It was evident the patient could only be relieved by the removal of the tumor. As her life was in danger from recurring attacks of peritonitis, I advised immediate removal. Total extirpation was made at my private hospital, March 16, 1893. The entire lower part of the tumor was adherent. After removal the tumor somewhat resembled in shape two large cocoanuts joined together. The patient made a prompt and uninterrupted recovery, and is now enjoying excellent health. By examination of the tumor we found a good explanation of the cause of the pain complained of when the patient attempted to walk. The tumor filled the pelvis, where it had become firmly adherent to its walls, the resulting pressure on the nerves of the sacral plexus, caus-

ing the pain in the legs, and inability to walk. The pain in the head was a reflex from the same cause. As the tumor continued to enlarge, it could do so only in one direction,—upward. The weight from above, when the patient attempted to walk, was an additional source of pressure on the nerves, which was somewhat relieved when the patient laid down. It is hardly necessary to add that this patient had been under constant medical treatment, including electricity, for years before the operation.

That we may have cystitis from the pressure of a fibroid tumor alone is well illustrated by the following case :

Mrs. K., Dayton, Ky. ; aged 36 ; married eight years ; no children ; no miscarriages ; referred by Dr. Richards. This patient had suffered for several years from pelvic pain, backache, pain in the limbs, and metrorrhagia. She did not consult a physician until about a year ago, when she was compelled to do so for relief from an irritable bladder. She was not conscious at that time that she had a fibroid tumor, but her physician was not long in determining the cause of the bladder difficulty, which was pressure on the bladder from a fibroid tumor filling up the true pelvis. No medication relieved this tormenting trouble, which gradually grew worse, until she developed cystitis of an aggravated form. Her sufferings were very great. When she was referred to me for consultation, March 2, she had not been able to retain her urine for longer than one hour at a time for more than two months. The tumor was fixed in the pelvis, and could not be pushed upward. Total extirpation was advised, and the patient readily consented. It was done March 6.

The patient made an easy and prompt recovery ; her bladder difficulty improved from the day of operation, and at the present time she holds her urine for five hours, and suffers but little inconvenience. I have no hesitation in saying that in due time she will be perfectly relieved.

Peritonitis is to be dreaded even more than hæmorrhage in these cases. My experience convinces me that in almost every case we have the two conditions present. We have periodical hæmorrhages extending over long months, or even years, with more or less severe pain located in one or the other ovarian regions or in both, gradually increasing from month to month, until finally the patient is attacked with acute general peritonitis, from which she may or may not recover. This inflammation will recur on the slightest provocation. These cases should be operated upon at the first attack, and not be permitted to go on and have a half-dozen or more recurrences, each one jeopardizing life. The cause of peritonitis in these cases, in almost every instance, is a pyosalpinx, a suppurating ovary, or both, complicating the fibroid, and it is obvious to every one that the only rational treatment is an early operation. This should be insisted upon in every case at the first attack of peritonitis. The following case illustrates this condition :

Mrs. N., age 52 ; married thirty years ; no children ; referred by Dr. DeWitt. The tumor extended three inches above the umbilicus. The patient had been conscious of the existence of the tumor for ten or twelve years, but had suffered but little inconvenience until about three years before the operation, when she

commenced to have irregular hæmorrhages, which gradually grew worse, but she would not consent to an operation. For about a year she had suffered considerable pain in both ovarian regions, and the hæmorrhage had been markedly increased. The patient lost much flesh, was anæmic, and very weak. I saw her on May 20, 1893, when she was just recovering from a sharp attack of peritonitis of some fifteen days' duration. Total extirpation was made May 23, 1893. Extensive intestinal adhesions were found; a pyosalpinx and a large suppurating ovary holding eight ounces of pus, which was imprisoned below the tumor in the pelvis, were removed with the uterus. The patient made a prompt recovery, and is to-day enjoying perfect health.

That intestinal obstruction should be one of the complications which might be anticipated in these cases is plainly evident. A small tumor fixed in the pelvis causes intestinal obstruction by narrowing the lumen of the rectum. This symptom can be overcome in the majority of cases after a few days careful medication, yet the temporary obstruction is almost always accompanied by an acute attack of peritonitis, thereby endangering the life of the patient, as the following case will show:

I was called in consultation with Dr. Van Meter, on May 7, 1894, to see a patient, a strong, healthy-looking German woman, 38 years of age, who has been known to have a fibroid tumor for two years. One year ago she had an attack of peritonitis with complete intestinal obstruction for five days; for twelve hours the patient had stercoraceous vomiting. The tumor was so firmly packed in the

pelvis, compressing the rectum to such an extent that the tumor could not be pushed by the side of the finger. The intestinal obstruction was finally overcome, only to have it occur again the 1st of May of the present year. Obstruction was complete for four days and was accompanied by acute general peritonitis, from which the patient is now slowly convalescing. An operation was advised for removal of the tumor, but not assented to. This patient has obstruction from pressure of the tumor in the pelvis against the rectum. Without operation she will die from this cause at no distant day.

Just as the question of extraperitoneal or intraperitoneal treatment of the pedicle in hysterectomy was so hotly contested a few years ago, so now is total extirpation and the extraperitoneal method being discussed.

The extraperitoneal fixation of the stump had the advantages over other methods used at that time of controlling hæmorrhage and yielding the best results. It therefore became the method that was almost universally adopted. The objections to this method are many and serious. If we use the extraperitoneal method and clamp, we not infrequently see the pedicle slough and become a menace to the life of the patient for days afterwards. Not a few die from septic infection and peritonitis from this cause. If the patient makes a primary recovery, she is not in all cases restored to health. Quite a number of these patients suffer great pain afterwards, owing to the dragging of the pedicle on the tender abdominal scar and pressure upon the distorted pelvic organs interfering with their functions. Not infrequently hernia

follows this operation, developing at the point of fixation of the pedicle. Last, and by no means least, the prolonged and painful convalescence which necessarily follows this method is a very serious objection to it.

The new methods which have entered the field and are contesting for supremacy in the hands of leading operators to-day are total extirpation and Baer's method. Baer's method is extirpation of the tumor and body of the uterus, ligating the uterine arteries, leaving the cervix and closing the peritoneum over it. Both of these methods have their advocates, but as yet total extirpation has yielded the best results, and is the method which I prefer above all others. While I am aware of the fact that I have not had as much experience in this line of work as some operators, yet I have removed the uterus for all purposes sixty times, and so feel justified in expressing my opinion on the subject.

The difficulties attending total extirpation are not so great as one who has never attempted it would suppose. They are easily overcome by one accustomed to performing difficult and complicated pelvic operations. With the patient in Trendelenburg's posture, the time required to perform the operation is no longer than that required in making many of the difficult abdominal and pelvic operations now being performed daily. After ligating off the ovaries and dividing the broad ligaments, the peritoneum is divided across the front of the tumor just above the top of the bladder and across the back of the tumor somewhat lower down. The peritoneum is then stripped down in front of the bladder and separated from the tumor down to the vagina. After stripping

the peritoneum from the back of the tumor, the uterine arteries and their branches are easily secured. The ligatures are placed between the two flaps of the peritoneum, but do not include this membrane in their grasp. The number of ligatures does not usually exceed two or three on either side. One end of each should be left about six inches long, and, after removal of the cervix, carried out through the vagina, to be cast off through that passage. The vagina is lightly packed with gauze, and the peritoneal edges, which were stripped from the tumor, are turned in towards the vagina and neatly coapted by a running stitch of catgut. The wound in the vagina is treated as after an ordinary vaginal hysterectomy.

This method has stood the test of experience, and is gaining in favor with the best operators of the present time. Theoretically there is little to be desired in technique, as it is very near perfection. It promises as good results in patients with thick abdominal walls as in those with thin abdominal walls. This cannot be said of the extraperitoneal method.

By total extirpation there is not as much danger of hæmorrhage as there is in ovariectomy, from the fact that in the latter operation the pedicle is transfixed and ligated *en masse*. Not infrequently the pedicle is thick and short, with great tension upon it, favoring slipping of the ligature and consequent hæmorrhage. In total extirpation the broad ligament is divided from the uterus and ligated in sections, which are not put upon the stretch, so there is no danger of the ligature slipping off. The ligatures do not include any uterine tissue, therefore the tissue within the grasp

is not susceptible to any undue shrinkage and resulting hæmorrhage. There is no raw surface left in the peritoneal cavity to form attachments to intestine and omentum. There is no sloughing of the pedicle. There is no distortion of the pelvic organs from the stump being fixed to the abdominal wall, pressing upon the bladder or interfering with the bowels. The risk from hernia at the point of fixation of the pedicle is entirely obviated. There is a comparatively painless convalescence, which is at least two weeks shorter than that of the extraperitoneal method. And here I wish to reiterate what I said in my first report on this

subject, read before the Academy of Medicine in December, 1892, that I was convinced that this method had come to stay, and that the clamp in abdominal hysterectomy would as certainly be a thing of the past as it is now a thing of the past in ovariectomy.

In conclusion, I wish to say that, with the present low mortality following total extirpation of the fibroid uterus, we should not hesitate to advise all patients who are subjects of fibroid tumor to submit to the operation at once if their life is endangered or health destroyed either from the tumor or complications arising from it.

The Treatment of Face Presentation.¹

BY EDWARD REYNOLDS, M.D.

FACE presentations are frequently caused by some one of the other mechanical complications of labor, such, for instance, as flat pelvis, or small fibroids in the uterine segment, or may themselves be complicated by one or more of the accidents of labor, such as prolapsed funis, hæmorrhage, or eclampsia.

First Stage with unruptured Membranes.—At the very beginning of labor, with the membranes still unruptured and the presenting part unengaged, the temporary occurrence of a face presentation is not extremely rare, but, under favorable circumstances, the vertex is spontaneously

re-established in a large proportion of such cases, by the occurrence of a spontaneous flexion. This phenomenon is due sometimes to the contraction of the flexor muscles of the fetal neck, sometimes to changes in the woman's posture and corresponding alterations in the fetal axis, and sometimes to changes of pressure due to irregular contractions of the lower uterine segment. It is manifest that this possibility ceases when the face is once thoroughly engaged or when the waters have drained away.

Treatment.—If, then, a face presentation is detected while the conditions still render a spontaneous re-establishment of flexion possible,

¹ Abstract of paper read before the American Gynecological Society, Washington, May 29, 1894.

everything should be done to promote this most favorable result, further vaginal examinations should be absolutely interdicted, on account of the great importance of preserving the membranes, and the obstetrician should confine himself to a policy of watchful inaction, or should, at most, content himself with the adoption of postural treatment, and attempts at furthering flexion by gentle external manipulations.

The patient should first be laid upon the side to which the abdomen of the child is directed, in the hope that, as the breech drops to that side under the influence of gravity, the relations may be changed so as to permit the uterine pains to re-establish flexion. If this fails, the woman should be placed in the knee-chest position, in the hope that flexion may occur under the action of the foetal muscles. When this expedient is unsuccessful, flexation of the head by external manipulations, after the method of Schatz, should be given a fair trial.

If the vertex becomes re-established, either by the efforts of nature or by one of these minor artificial procedures, the membranes should be ruptured, the head should be crowded into the brim by pressure from above, and held there till a firm engagement of the vertex has occurred.

If these measures fail, the greatest care must still be exercised to preserve the integrity of the membranes. As long as they persist, the care of the first stage is left to nature.

Early Rupture of the Membranes.—Dry face labor is not only extremely unlikely to terminate naturally, but in the small proportion of cases in which nature is efficient, the foetus is

exposed to great danger from the pressure which the dilating cervix necessarily exerts against the great vessels of its neck; a danger which is increased by the fact that the size of the small and tapering face is insufficient to effect the complete dilatation of the os, and that the neck must enter into the cervix before it reaches its greatest size. If the membranes rupture while the os is still small and rigid, the prognosis for the child under the care of nature is so very unfavorable that, in my opinion, the expectant policy should be abandoned and some form of operative treatment should be resorted to at once.

Treatment of Early Rupture of the Membranes.—Two methods of action are applicable. The face presentation may be changed into a presentation of the breech by one of the minor forms of version, or the os can be dilated and the hand passed into the uterus with the intention of restoring the vertex by a manual flexation of the head or of performing an internal podalic version. The choice between them depends upon the size and condition of the os at the time of the rupture of the membranes.

When the os is dilated sufficiently to admit two fingers, bipolar podalic version can be performed under anaesthesia and in uncomplicated cases.

When the membranes have persisted till the os is almost or wholly dilated or when manual dilatation has been done, the subsequent treatment should be influenced mainly by the position of the chin. When the chin is anterior and the dilatation has been spontaneously accomplished by the membranes, the obstetrician should content himself for the time with a

careful observation of the processes of nature. If the head makes steady progress through the superior strait, there is then every probability of an easy and swift delivery, but the foetal heart should be watched carefully because of the danger of compression of the vessels of the neck, and if irregularity in the foetal circulation exists, an expectant policy should be abandoned. When an anterior position of the chin is to be delivered by operative means, the expedients at our disposal are the application of forceps to the face, internal podalic version, and the restoration of flexion by the hand. I prefer the last-named operation.

The application of the forceps to the face high is dangerous and difficult to the child, that it should be reserved for a last resource. If version is to be performed, it should be preceded by a manual flexion of the head, when this is possible, because the projection of the occiput, which is incidental to the attitude of the child in face presentation, not only renders the version more difficult but exposes the uterus to an unnecessary degree of danger.

We have left, then, only for consideration in uncomplicated anterior positions of the chin the operation of manual flexion. When both manual flexation and version are rendered impossible or dangerous by the existence of constriction rings in the uterus or by the thinning of the

lower uterine segment, the application of forceps to the face is justifiable in anterior position of the chin, and occasionally successful in saving the child.

Mento-Posterior Position.—If the cervix is extremely rigid we must do an external or bipolar version, but if it is already dilated, or if its condition renders a manual dilatation advisable, we have four operations at our disposal: the application of forceps to the posterior position of the chin, rotation of the chin to the front and application of forceps, immediate version, and the restoration of the vertex by flexion.

I prefer the restoration of the vertex by flexion.

Craniotomy vs. Abdominal Delivery.—When in case of face presentation all of the manœuvres which have been already recommended are found impossible, the vitality of the child will have been seriously if not hopelessly compromised, and the mortality of abdominal operations performed at such a stage of labor has always been so great that the risk to the mother is greater than we are justified in subjecting her to, for the sake of an exhausted foetus. The disgusting alternative of craniotomy to the living foetus is then the only operation indicated; but it may be added that this can only be forced upon us as the result of bad obstetrics. Abdominal methods of delivery are never indicated in uncomplicated face labor.

Abstract of Paper on Fatal Nausea and Vomiting of Pregnancy, with Report of Cases.¹

BY EDWARD P. DAVIS, A.M., M.D.,

PHILADELPHIA.

CASE I.—Mrs. A., widow, had been treated for several months by a physician who supposed her to be suffering from chronic gastritis. An expert physician who saw her in consultation had confirmed the diagnosis and approved the treatment. Her symptoms attracted the attention of a medical student boarding in the house, who suggested to the family that disease of the pelvic organs might be present, and that a vaginal examination be made. I was asked to see the patient in consultation by the physician in charge. She was emaciated, with a rapid, feeble pulse, sordes beginning upon the teeth, her eyes sunken and glassy, her breath offensive, and emaciation well marked. She was vomiting food taken, accompanied by mucus stained with coffee-ground material.

She complained of pain in the chest beneath the sternum. Her intellect was clouded, although usually her mind was clear. Vaginal examination revealed a uterus enlarged several times the usual size; it was retroverted, the os and cervix exceedingly soft. The finger readily entered the cervical canal, but found the internal os closed. As the patient was without systematic care, she was urged to go at once to a hospital where trained nurses could at-

tend her. Twenty-four hours after this she was removed to the Philadelphia Polyclinic; a tampon of carded wool was placed beneath the uterus, and the patient was carefully fed by rectal injections, and stimulated hypodermically. The uterus was readily raised, and its altered position gave the patient no increased distress. Her vomiting ceased, she retained food given by the rectum, and also very small quantities of food taken by the mouth. The tampon was removed, the fundus of the uterus brought higher in the pelvis, and sustained by a packing of gauze. The patient's general condition, however, grew worse, purpuric spots appeared upon the body, sordes increased, low delirium supervened, and she died apparently from exhaustion.

Permission for a post-mortem examination could not be obtained.

CASE II.—This case was that of a woman, aged 30 years, who was first seen two years ago, and who complained of suffering caused by dysmenorrhœa, accompanied by ante-flexion and prolapse of the uterus. She experienced relief at that time by the use of carded wool tampons. She passed out of observation, and came to my notice again in October, 1893, stating that she had received treatment from another physician; that she had, she thought, suffered from abortion; that she was then

¹ Read before the American Gynecological Society, at its annual meeting, Washington, May 29, 1894

pregnant about two weeks. I afterwards learned from the physician who treated her that granular degeneration of the cervix had been present, with a greatly softened and patulous os uteri, with extreme ante flexion.

In addition to the usual discomfort of early pregnancy, the patient suffered from intense nausea and vomiting. She had always been of nervous temperament and lacking in self-control. She complained that, in addition to vomiting, she suffered severely from straining and retching. The patient's temperature was subnormal, her pulse remaining below 100, her condition exceedingly variable, substernal pain, occurring in the early evening, being especially severe. Her pulse gradually increased in frequency, and at the end of the thirteenth week of pregnancy rose above 100.

At the end of the fourteenth week of pregnancy, I saw the patient in consultation with Dr. Anna Broomall; her pulse was 120, her temperature normal, her tongue slightly coated; she was but little emaciated. The uterus was ante flexed, the fundus low, the lower segment impacted in the pelvis. Under partial anæsthesia, the uterus was raised and the vagina tamponned. Coffee-ground vomit was present, although in slight amount; substernal distress, however, continued and was excessive. On the day following the replacing of the uterus, the patient's symptoms were aggravated. On the second day following the first consultation, the tampon was changed, and the uterus was found considerably higher in the pelvis. On the third day, another consultation with Dr. Broomall was held, and I urged that the cervix be dilated,

and gave an unfavorable prognosis. Dr. Broomall urged that the stomach be washed out at the same time. Under chloroform, the internal os was found to be rigid, thickened, and tightly closed. The finger could not enter the uterus, and the bladed dilator was used until the finger could be inserted. This dilatation was increased by the use of the solid metal bougies until the index finger entered easily. The stomach was thoroughly douched with dilute saline solution. Following this dilatation, the patient's vomiting ceased, her substernal distress ceased entirely, and she spent the best night for two weeks. Her pulse was 130, her temperature 99° F. In the afternoon, her temperature rose to 101° F. At 6 P.M., a chill occurred, with temperature 102.6° F. This was followed by syncope, from which the patient slowly rallied. Pain and hæmorrhage supervened, and I saw the patient at 11 P.M. She was excessively weak, but conscious, and complaining of labor pain only. Her vomiting and substernal distress had entirely ceased. At her urgent request and that of her husband, it was decided to terminate the abortion at once. She recognized the hopelessness of her condition, but begged to be relieved from the pain of abortion and excessive weakness. She was accordingly stimulated by hypodermic injections, and under chloroform the fœtus was quickly removed, and the uterus thoroughly curetted with the blunt douche-curette. It was then packed with iodoform gauze, and carried well up into the pelvis. There was no hæmorrhage during the emptying of the uterus; the patient rallied from the anæsthetic, became conscious,

but died in syncope shortly afterwards.

Post-mortem.—Extraperitoneal fat was abundant. The fundus uteri was one inch below the umbilicus. The peritoneum and intestines were normal; no evidence of septic paresis was present. Both tubes and ovaries showed no gross evidence of disease. Uterus was slightly oedematous to pressure. The spleen was vascular, not enlarged or especially softened. Both kidneys were flabby in consistence, and the cortices stained bright-yellow. The liver was normal in shape, the gall-bladder normal, the liver substance of normal consistence and bile-stained.

The uterus, tubes, and ovaries were removed. Longitudinal section of the entire uterus was made through the anterior wall. The uterus was distended with gauze, and was dark purplish-red in color, its sinuses filled with soft currant-jelly masses not clotted. On the posterior wall, on a line extending transversely between the orifices of the Fallopian tubes, a transverse line resembling scar-tissue could be seen. The internal os had been dilated, but was excessively resistant, resembling gristle. The placenta had been attached over the fundus and orifice of the left tube; a small portion of the placenta remained adherent.

Especially noteworthy was the condition of the blood, which was fluid, dark currant-jelly in color, and without clots. No ante-mortem clot was found in the sinuses of the uterus. Also remarkable was the flabby condition of the heart, kidneys, spleen, and uterus, and the stained appearance of the parenchyma of all the viscera; this staining was with a dark currant-jelly fluid.

The patient died a cardiac death.

Referring to the notes of the patient's condition during the last two weeks of her life, we find that albumen and hyaline casts were found in considerable quantities.

In reviewing the history and pathology of this case, I desire to call attention, first, to the conditions present in the pelvis; marked antelexion of a uterus, the neck of which was composed of dense connective tissue; the presence of retention-cysts in its cervix, the impaction of the uterus against the symphysis, and the excessive tenderness of the pelvic tissues were certainly irritant cause enough for reflex vomiting. The hæmatin-staining of the patient's tissues, the fatty degeneration of the various portions of the body so extensively present, and the great softening of the heart-muscle, point to fatal anæmia. This fatty degeneration was largely responsible for the fact that the patient seemed but little emaciated, and this appearance of nutrition was urged by one of the physicians in the case in support of a favorable prognosis.

CASE III.—Mrs. X. was a primigravida, the wife of a clergyman. She was seen in consultation by me at the request of Dr. Loux, of Philadelphia, who had been called in attendance a few days previously. During the first weeks of her pregnancy she had been subjected to homœopathic medication, which consisted largely of the administration of water in teaspoonful doses, and also comforting assurances regarding the future. On examination the patient was not excessively emaciated. Her pulse varied from 100 to 120; her temperature was not above 99° F.; she complained of very little abdominal distress, but at night

suffered from substernal pain, nausea, and vomiting. Vaginal examination revealed the uterus anteverted and low in the pelvis, but not impacted. The physician in attendance had endeavored faithfully to feed the patient in various ways, had given sedatives, and also stimulants hypodermically, but without avail. It was his opinion that prompt emptying of the uterus was indicated. The vomitus had been streaked with coffee-ground material for two days. After examining the patient, I agreed with Dr. Loux that, inasmuch as the uterus was not impacted, but sharply anteverted, we would gain little by simply elevating it in the pelvis. I urged that the cervix be dilated, and that if this was not followed by immediate improvement, that the uterus be curetted and packed with gauze as soon as possible. This advice was conveyed to the husband, who was distinctly informed that his wife was in a very critical condition. He asked for delay until the following day to communicate with her relatives. Immediately after the consultation, members of his congregation persuaded him that the gloomy prognosis was entirely unjustified, and strongly urged employment of a different physician. The second physician called in consultation at once supported the view of the parishioners, and assured the husband that rest and feeding and waiting were all that were necessary, quoting the familiar obstetric teaching, that "cases of nausea and vomit-

ing of pregnancy often improved suddenly and radically, and that the practice of abortion is rarely indicated." I did not see the patient again, but am informed by Dr. Loux that the patient went steadily from bad to worse, dying from exhaustion a short time after I saw her. In her case I based an unfavorable prognosis upon the substernal pain, coffee-ground vomit, the length of time in which she had been in an anæmic condition, and her general aspect, which closely resembled, but in less degree, that of the cases already described.

In conclusion, I desire to advance the following propositions, of which the cases reported are illustrations: Nausea and vomiting of pregnancy are dangerous in proportion as they induce pernicious anæmia. Such a condition of danger is to be recognized by studying these cases in the light thrown upon them by the pathology of anæmia. While it is possible that sudden and radical improvement may occur in cases where a functional neurosis is the predominant factor, only when pernicious anæmia is once established delay is dangerous, no matter at what period of pregnancy the patient is seen. While it is true that raising and sustaining an impacted uterus will relieve many milder examples of this affection, cases in which danger threatens should be met by prompt dilatation and emptying of the pregnant uterus, which is to be done by modern surgical methods.

Symphyseotomy versus the Induction of Premature Labor.¹

BY CHARLES P. NOBLE, M.D.,

Surgeon-in-Chief of the Kensington Hospital for Women, Philadelphia.

AFTER having disposed of the subject, Is embryotomy upon the living child a justifiable operation? the author said, It is my purpose in this paper to present the advantages of symphyseotomy as contrasted with the induction of premature labor in the management of cases. If labor in women having moderately-contracted pelves. The class of cases more especially referred to is the flat pelves, with a conjugate diameter of three inches or more, and the generally-contracted pelvis, with a conjugate diameter of three and a quarter inches or more, and even in flat pelves with as short a conjugate diameter as two and three inches. It is recognized, of course, that disproportion between the head of the child and the pelvis depends not only upon the diameters of the pelvis, but also upon those of the head; and that spontaneous labor, or labor assisted either by the forceps or version, is quite possible in this class of cases, when the head of the child is small or more than usually compressible. Given a woman in the eighth month of pregnancy, having a pelvis of the class under consideration, what shall be done? Shall labor be induced sufficiently before full term to permit the spontaneous delivery of the child, or its delivery assisted by forceps or version; or shall the pregnancy be permitted to

go on to term, and then, if necessary, symphyseotomy be performed? This question, of course, must be studied from the stand-point both of the mother and child. From the stand-point of the mother, we have to consider the mortality and morbidity of the operation of inducing premature labor as contrasted with that of symphyseotomy. The general mortality of the induction of premature labor is given in the text-books as 5 per cent. The general mortality of symphyseotomy is stated to be about 10 per cent. As a matter of fact, I believe both these statements are decidedly erroneous. Five per cent. is undoubtedly too high a mortality, for the induction of premature labor is given in the text-books as 5 per cent. The general mortality of symphyseotomy is stated to be about 10 per cent. As a matter of fact, I believe both these statements are decidedly erroneous. Five per cent. is undoubtedly too high a mortality for the induction of premature labor. I have reason to believe that in good hands, when the indication for its performance is contraction of the pelvis, that its mortality does not exceed 1 per cent. The dangers to the mother under these circumstances are far less than they are, for example, when the indication is puerperal eclampsia or placenta prævia. On the other hand, it is quite as absurd to say that the inherent risks to the mother from symphyseotomy are

¹ Abstract of paper read before the American Gynecological Society, Washington, May 29, 1894.

so great as indicated by a 10 per cent. mortality. It is the old story of the fallacy of miscellaneous statistics. For the sake of argument, it may be admitted that the general mortality of symphyseotomy is 10 per cent. This represents the results which have been obtained under the conditions which exist in the practice of the profession at large. It includes cases in which the indication was proper, the operation skilfully done at the right time, and after a proper technique by skilful men; and it also includes the "too late" cases, in which the patients have been maltreated by midwives or by careless or ignorant practitioners before the performance of symphyseotomy, which conditions have nothing to do with the inherent risks of the operation. In order to contrast the relative dangers to the mother of symphyseotomy and the induction of premature labor it will be necessary to analyze the cases. It must be recalled that the induction of premature labor is an operation done at a selected time, upon women in good condition, almost invariably by an obstetrician of experience. For the comparison to be just only such symphyseotomies should be selected in which similar conditions prevail. Under these conditions I am satisfied that the maternal mortality will not exceed 1 per cent. under either operation.

It has been amply demonstrated that a large percentage, about 66 $\frac{2}{3}$ per cent. (Winckel), of premature children die within a few months of birth. With the incubator the infant mortality in the hospital was 18 per cent. in the Leipzig Maternity, and 30 per cent. in the Paris Maternité. Winckel's statement is explained by

the large mortality among premature infants during the first year of life. The contrast between the prospects of a premature child, born four or six weeks before full term, and those of a child born under symphyseotomy at term are altogether in favor of the latter, whose prospects are nearly as good as the average of infants. This fact and the conviction that the dangers to the mother are about equal have convinced me that symphyseotomy at term is to be preferred to the induction of premature labor.

A paper of Dr. R. P. Harris, read before the American Gynecological Society in 1892, giving reports of the results of symphyseotomy in Italy, convinced me of the advantages of the operation. At that time I had under my care Mrs. G., who was seven months pregnant with her fifth child. She had been delivered once of a small child (not weighed) by vigorous traction efforts made with the forceps, the child being born with its head so injured that it lived but a short time. The second labor resulted in the spontaneous delivery of a small child (not weighed). The third labor was a Cæsarean section done by Dr. Howard A. Kelly, with the delivery of a child weighing 6 $\frac{1}{16}$ pounds. The fourth labor was induced five weeks before term by me, with great difficulty, after the application of the high forceps. The child weighed 5 $\frac{3}{8}$ pounds.

Mrs. G.'s pelvic measurements are as follows: A.S.S., 24 centimetres; Cr. II, 26 centimetres; D.R., 16.5 centimetres; C.D., 8.5 centimetres; C.V. (estimated), 7 centimetres. My thorough knowledge of the capacity of her pelvis, and my lively recollection of the difficulties encountered in

delivering the premature child by forceps, made me hesitate to again induce labor. I decided instead to permit the patient to go to full term and then to deliver by symphyseotomy. The patient was informed that her labor would be the first in which symphyseotomy had been done instead of inducing premature labor. My conclusion had the endorsement of Drs. Harris and Parish. Symphyseotomy was done on December 5, 1892, and was followed by the high application of the forceps, and the delivery of a boy weighing $8\frac{1}{8}$ pounds. The details of this symphyseotomy and the reasons why it was advised have been reported in a communication to the College of Physicians.¹ The mother made a good recovery and again became pregnant. She was delivered a second time under symphyseotomy and the application of the forceps, on March 19, of a girl

weighing $6\frac{6}{16}$ pounds, and recovered without other incident than a mammary abscess. She is thus the first woman in the United States upon whom a second symphyseotomy has been performed, as well as the first woman in the world upon whom symphyseotomy has been done in preference to the induction of premature labor.

In conclusion, I submit this paper as a contribution to modern obstetrics, in the hope that it may aid in quickening the interest of the profession in the rights of the unborn child. As the subject is comparatively new, it is probable that the general experience of the profession will modify our views in certain particulars; but as progress is ever forward, such changes will almost surely be in the direction of adding to the life-saving value of the agencies already at our command.

Malignant Growths of the Uterus.²

BY THOMAS CUNNINGHAM, M.D.,
CAMBRIDGE, MASS.

THIS important group of affections comprises the various forms of carcinoma and sarcomatous growths. Their malignancy has been known for centuries, but the causes are yet a mystery. Science has done much, however, to familiarize us with their biology, clinical course, and the relations they bear to living organisms,

and if we appreciate this fact, we need not be wanting in resources that will enable us to cope somewhat successfully with one of the most painful and fatal diseases to which the flesh is heir.

Nothing affects the mind of a patient more than the dread of cancer, hence the importance of a thorough knowledge of its early symptoms, particularly when situated in the uterus; for owing to its insidious

¹ Medical News, Vol. 1, 1893.

² Read before the Gynecological Society of Boston, May, 1894.

ness the golden opportunity for both patient and physician will soon have passed if certain signs are not taken into account and a careful examination made. It commonly attacks women of fine physique and blooming health, and only the keenest sense of duty will often prompt us to take note of what at first seems merely a trifle. When the disease is advanced, the general appearance of the patient is characteristic. There is great wasting of the body, with weakness, a dirty-yellow hue of the skin with foul-smelling discharges, and an expression of great anxiety and distress, which is difficult to describe but not readily forgotten. While preparing this paper, I had an excellent object-lesson in the case of a poor woman who has been a great sufferer for more than a year. All the tissues from the vulva to the abdominal cavity are thoroughly infiltrated, but as yet I have not been able to discover any fistulæ. She is 54 years of age and the mother of nine children. She did washing for a living, and being intent on making a livelihood, did not take note of her real condition until apprised of it by a terrible flooding while at work. She immediately sought medical advice, but only to hear that she was doomed. The disease had already made such headway that nothing curative could be thought of. Opium alone is her comfort, and if death would only come quickly, what joy for one poor sufferer, to say nothing of the relief to friends and attendants.

The cervix is the seat of cancer in about 98 per cent. of the cases. The principal forms are scirrhus, medullary, and epithelioma. According as the connective tissue or epithelial cells are in excess, the growth is

known as hard or soft cancer. The medullary is the one that grows the fastest and kills quickest. Epithelioma, cancroïd, or rodent ulcer, as it was formerly called, is the least malignant. It progresses slowly, does not produce metastasis, and generally spreads downward into the vagina, giving rise to the cauliflower excrescence. This is a very friable mass, which bleeds readily when touched. It is often as large as a hen's egg, and may completely fill the vagina. This type being more local than the preceding variety, the uterus, even late in the disease, can be freely moved without pain, whereas fixation is the rule at a comparatively early date in the others.

As cancer of the fundus may be primary or secondary, it is found there much oftener than was supposed. It may be diffuse, but when circumscribed a polypus is formed, owing to the uterine glands undergoing hypertrophy. As it is pretty sure to ulcerate, a diagnosis can be made then if there has been difficulty before. Sarcoma generally affects the body of the uterus, and is either diffuse or circumscribed, the latter form being known as recurrent fibroid. There is no capsule, and it is usually soft. The less fibrous tissue they contain the more malignant they are. It is more frequent at the climacteric, but on account of its frequency in persons under twenty years of age is known as the cancer of youth. To make a diagnosis, however, is a difficult thing on account of the leading symptoms, menorrhagia, leucorrhœa, and pain being those common to fibroids and hyperplastic endometritis. In sarcoma, however, there is greater pain, greater softness, emaci-

ation, and cachexia. About a year ago I saw Dr. Goodell do a vaginal hysterectomy for the diffuse form that had been treated for a long time as an endometritis.

The principal causes of uterine cancer appear to be mature years, the greatest susceptibility existing between 40 and 60, child-bearing, lacerations, erosions, and other deteriorating influences. Glatzer has shown that the proportion of living women rapidly diminishes with each successive year after 45 years of age.

As for cancer of the body of the uterus, Goodell emphatically declares it to be a disease of old maids and sterile women.

As there are very few symptoms in the early history of cancers of the sexual organs, I think it would be well if we made it a rule to examine all our female patients vaginally whenever they present themselves for treatment about the time of life when important changes are going on, and which statistics show are favorable to the development of malignant growths. Leucorrhœal discharges of whatever character and at all times should be carefully looked into and

the cause removed, if possible. Shooting pains and dull aches in the sacral or hypogastric regions ought not to be overlooked, for sometimes these will be the only signs we will have. A little over a year ago, while attending a robust-looking patient for the treatment of influenza, she called my attention to a slight leucorrhœal discharge that troubled her more than usual of late. I paid no attention to it at first, thinking it due to her debilitated condition, but being reminded of it again on my last visit, I took the trouble to make a vaginal examination, where, to my utmost surprise, I found an epithelioma of the cervix. I had my diagnosis confirmed as soon as possible, and four weeks from the time of discovery Dr. Marcy did a vaginal hysterectomy. She made a rapid recovery, and is in perfect health now. If I had not examined her when I did, the chances are that when she consulted me again it would have been too late. Since then I have been more careful, and the more closely we look into those cases the more convinced we must be that eternal vigilance is the price of success, nothing more, nothing less.

SOCIETY REPORTS.

American Gynæcological Society.

THE nineteenth annual meeting of this Society was one of the most successful and interesting in its history. An unusually large proportion of the members were present, owing probably to the fact that this is the year

of meeting of the American Congress of Physicians and Surgeons.

The first subject for discussion was, "Extirpation of the Uterus in Diseases of the Adnexa." The affirmative side being taken by Drs. Baldy

(see page 574), Krug (see page 579), and Hanks, and the negative by Drs. Wylie and B. McE. Emmet.

Dr. HANKS said: The answer to the question whether to remove the uterus depends on its condition, and the operation should only be done by experts, never by amateurs. He refers to the French vaginal work in 1891 and Polk's paper in 1893, reporting several cases where patients were not fully cured by removal of adnexa. He had had several such cases where the patients were not wholly relieved by the removal of the diseased appendages. He said that one should not urge the removal of the tubes and ovaries unless there was evidence of permanent lesion causing the symptoms of which the patient complained. He thought the uterus should be extirpated in cases of old pyosalpinx with much exudation and purulent endometritis, chronic catarrhal endometritis, puerperal salpingitis and ovaritis, and puerperal endometritis, without evidence of drainage into the uterus, also in cases if, in removing the ovaries and tubes, many adhesions were broken up, the uterus being retroverted or retroflexed and held down. He thinks that the operation should not exceed forty-five minutes.

B. McE. EMMET: He praises the French vaginal system in cases of pelvic suppuration, and asks if we shall extend this to cases opened by the abdominal route. He also thinks that, if the tube is removed, it is enough to disinfect the uterine end of the tube, and that curetting and drainage will cure the uterus.

Dr. W. GILL WYLIE said the uterus should be removed with the tubes and ovaries when there are indications of malignancy, of intractable

disease within the uterus, of septic disease, in fibromata, and as a rule when the patient was over 35 years of age. Most of those who had suffered would not had the uterus been divulsed, curetted, and drained before or subsequent to the removal of the tubes and ovaries.

DISCUSSION.

Dr. WATHEN, of Louisville, Ky., was positively opposed to removal of the uterus unless there was positive evidence of disease in the organ.

Dr. BYFORD, of Chicago, was opposed to the removal of the uterus excepting where it was safer as an operative procedure than the removal of the appendages alone and where the organ could not be cured.

G. M. EDEBOHLS, of New York, thought there was much in favor of removing, much to be said against it. He would use it when pus demanded downward drainage and in diseased condition of the uterus.

Dr. CUSHING, of Boston: I can quite agree with the last speaker, that this is hardly a question in which we would wish to take either the affirmative or negative side on the whole subject. It seems to me our views are not so very far apart after all, remembering the limitations which the introducers of this discussion have put on the performance of the radical operation,—namely, where it can be safely done, considering the state of the patient and skill of the operator. These are the two great factors. There are numerous cases in which many men could get out the tubes and tie them off safely, when the same men would not be able to proceed to remove the uterus without greatly prolonging the operation, and

adding largely to the shock. I will not say there are not a dozen men in the country who are operating so frequently that they could go on and remove the uterus, and not appreciably increase the amount of shock. There are many of us, however, who can remove the uterus, but who do find that it prolongs the operation anywhere from fifteen minutes to three-quarters of an hour. I have seen a very good man remove the uterus in a perfectly clean, straightforward case of fibroid, and remove it nicely and skilfully, but he required just about two hours, and he was a hospital surgeon and a member of this Society. Some men may do the operation in twenty minutes; others cannot. Therefore the personal factor must enter into the question when we would establish general rules. It is not wise to promulgate the view that it is just as easy to remove the uterus as it is to remove the tubes.

As for the question of the patient, I see a good many cases in which, by the time I get adhesions separated, the bowels free, and the tubes enucleated, I feel that the patient has had about enough surgery for that day, and, as Dr. Wathen has said, it would be better to take the chances of the necessity of having to do hysterectomy afterwards in a certain proportion of the cases rather than follow a general rule to remove the uterus in every instance.

With regard to drainage, I disagree somewhat with some of the speakers. A glass drainage-tube properly used will drain the pelvic cavity. There is no doubt about that. Vaginal drainage does not reach the lowest part of the pelvic cavity. There is a sac

below. It can be seen in vaginal hysterectomy. You can put your finger into it.

In cases in which, owing to old adhesions, there is considerable oozing from a large bleeding surface, if glass drainage is not enough, we may resort to gauze packing, and if sufficient pressure cannot be obtained in this way to check all hæmorrhage, we may have to remove the uterus.

But I have had cases, as perhaps all have, where a large heavy uterus, evidently subject to old metritis, would fall back, although fastened forward at the time of removal of the appendages, and there I could conceive that, in the hands of an expert operator who could remove the uterus without adding much to the shock of the operation, it would be wise to do so in the first instance. In certain selected cases, therefore, I think it would be proper to do the more radical operation.

Dr. KOLLOCK approved of the last speaker's remarks, and said that he had never lost a case of vaginal hysterectomy removing tubes and ovaries.

Dr. J. E. JANVRIN, of New York, thought the only point which concerned us was what diseases of the uterus, and how much, demanded its removal.

Dr. GORDON, of Maine, thought that if the uterus were healthy and in place there was every reason for leaving it.

Dr. NOBLE, of Philadelphia, believed that it was unwise to remove the uterus simply because the tubes and ovaries required removal.

Dr. PRYOR believes in removing the whole uterus, leaving no portion of the cervix to complete the vaginal vault.

Dr. A. P. DUDLEY advocates removing the uteri in puerperal infection, extensive pyosalpinx, where the uterine end of the tube is involved, and there are many adhesions, also in old pelvic disease with many adhesions, holding down the uterus.

Dr. CHARLES P. NOBLE read a paper on Symphyseotomy *vs.* Induction of Premature Labor, see page 594.

Dr. MURRAY congratulated Dr. Noble on his paper. The two operations, symphyseotomy and premature labor, are here compared as elective operations. Symphyseotomy has heretofore been an operation of last resort in difficult and delayed cases; induction of premature labor is far from being absolutely successful as far as concerns either mother and child, although in hospitals the results are good. The time is not always calculated correctly. He thinks there is next to no danger in symphyseotomy when in competent hands as a matter of election.

Dr. JEWETT. Mortality of induced labor is by no means nil; has lost a case himself from pulmonary embolism. Thinks we do not yet realize possible blessings of symphyseotomy.

When the operation is done early as a matter of election in competent hands, there ought to be hardly any mortality.

Dr. ENGLEMANN approves of what Dr. Jewett has said, and thinks the operation will go on giving improved results. When done before death of child in early stages of labor, the recent Italian statistics give admirable results.

Dr. McLEAN thoroughly agrees with Dr. Noble in everything except in the hope that version will be done away with. Although children are lost by version, they ought never to be lost.

Dr. NOBLE, closing, says only that he thinks version is a cause of multitude of foetal deaths, and will be less used in the interest of the child.

The Gynæcological Society of Boston.

Regular Meeting, May, 1894. Albert H. Tuttle, M.D., Secretary.

DISCUSSION OF DR. CUNNINGHAM'S PAPER. (See p. 596.)

Dr. FRISBIE thought an early examination of the patient should be insisted on, as a little waiting may advance the disease to a condition too far for operation. By examination of the fetid discharges of women immediately they are discovered a

chance will be offered, in many instances, to save life.

Dr. W. S. BROWN. In the early stages of cancer of the uterus there is no pain or fetid discharge; this only comes on late, as soon as the tissues break down, and if one waits until this symptom arises it will often be too late to render the patient surgical

assistance. It is a popular opinion that pain and odor are essential characteristics of cancer, and that without these symptoms cancer cannot be present. This was emphasized by an example in his practice where another physician insisted there could be no cancer, since these symptoms were wanting. This is certainly erroneous, and should be corrected.

Dr. A. P. CLARKE said that malignant disease of the uterus had a daily growing interest for the profession. It most frequently comes from lacerations of the cervix, which have been neglected and which have become causes of persisting irritation. In true cancer, odor, acrid and excoriating discharges, and hæmorrhage are frequently found. Under these circumstances a most careful vaginal examination should be made. There is not much to be gained by a partial removal of the diseased organ since it rapidly extends to the corporeal portion. Sarcoma as compared with cancer is of longer duration; as a rule, cancer terminates fatally in about two years. It may be some time before there is a breaking down of the tissues and hæmorrhage. At first hæmorrhage is rarely profuse.

Dr. STEVENS. Hæmorrhage coming on at the menopause indicates always that there is something which is not right, since nature never closes this period of a woman's life by such means. Since, then, it points to something wrong its occurrence should lead one always to look for malignant disease.

Dr. MILLER thought that physicians did not make a vaginal examination as often as was necessary.

Dr. BURT said that, although this was a subject on which much had

been said, it was not properly understood yet. The cases are recognized late because the prominent symptoms appear late. If a bad-looking cervix appears it should be carefully examined for malignant disease. Laceration of the cervix may be a cause of cancer and only recognized late. Cancer of the cervix may be well advanced and the mother pregnant, and if allowed to remain until delivery it may be too late for operation. Removal of the growth, uterus, and all is necessary.

Dr. BATES asked if no cases of cancer of the uterus occurred under 40 years of age, as is commonly stated in text-books of gynecology. Answer, Sarcoma is called the cancer of youth, and is frequently seen at an early age; true cancer, as a rule, appears after 40 years. Dr. Emmet draws a line between metrorrhagia and menorrhagia, the former, occurring after the menopause, should cause one to look carefully for malignant disease.

Dr. TUTTLE. The treatment of malignant disease of the uterus is understood beyond a point of discussion, but the diagnosis still offers a chance for important consideration. Cancer of the cervix is readily recognized, as a rule; unfortunately, however, when first seen the disease has extended beyond surgical treatment. If there is merely an ugly-looking cervix, it should receive surgical treatment, and afterwards be carefully watched for recurrent symptoms.

With malignant degenerations of the body of the uterus it is a different matter, and after attention has been called to the trouble in this situation it is at times a very difficult matter to make a diagnosis. In a recent discussion we have shown that hæmor-

rhage may be a troublesome complication of fibroids at any period, and it is obvious such hæmorrhage may be indistinguishable from that of malignant disease; excessive and fetid discharge does not come exclusively from cancerous growths, but, after the turn of life, is frequently seen as a benign condition so severe that the patient is obliged to seek professional advice, the discharge becoming so acrid that the tissues are made thin and friable, the least manipulation causing minute excoriations with slight hæmorrhage. On the other hand, the discharges, even at a late period of malignant disease, may not be excessive or fetid, and are rarely acrid. A careful examination of the uterus may not avail a great deal; the size may not be increased, and when it is it may be due to a variety of benign conditions, and the cervix may be smooth and of normal appearance. The pain of malignant disease comes from a variety of sources, usually complicating inflammations, especially circumscribed peritonitis, and this variety of pain is a frequent accompaniment of most of the pelvic inflammatory troubles, such as are found with benign conditions. The difficulties in the way of a diagnosis are thus manifold, and it is often necessary to study carefully the developmental history of a case before one can come to a conclusion of its malignancy, and after all the decline in health, the beginning of constitutional symptoms may mark the first time when one can conclude that a malignant condition is present, a fact already pointed out by our president. In a case which I recently reported to the Society, a large tumor had existed in the uterus for a long period;

it had apparently decreased in size, and when first brought under my care was immediately removed in part by the curette, the fragments were inspected by a noted pathologist, who considered they were the tissues in a state of mucous degeneration; at a second operation the whole growth was removed, and then symptoms recurring an examination showed a regeneration, confirming the diagnosis of malignant disease.

Dr. MARCY said he must make an exception to one remark of the secretary, that we must wait for constitutional symptoms before making a diagnosis. Cancer is first local and secondly general, and with advance to the second stage of the disease, constitutional symptoms arise when the disease may be beyond operation. In his opinion it is a growth in the body of a foreign element derived from without. He has succeeded in growing a round-celled organism in cultures, which he hoped to show was a cause of cancerous disease, but he has not presented his investigations to the profession because he failed to reproduce the growth in lower animals. If the disease is local at first, the sooner it is removed the sooner will be the outcome of safety. A good diagnostician is necessary. We should not be obliged to wait until we have made two or three curettings before reaching a diagnosis. Two or three months should not be lost before operating, as the patient may arrive at a hopeless condition, or one where the dangers and difficulties of the operation are quadrupled by extensive infiltration of neighboring tissues. A piece of the growth should be cut out and examined microscopically. When a breast is the

seat of foreign growth one does not hesitate to make a radical operation, and remove it no matter what may be the character of the tumor, and as the relations of the uterus offer a better chance for radical cure, why should one hesitate to resort to it.

Dr. IRISH said he agreed absolutely with Dr. Marcy. In his own experience most cases of uterine cancer have extended beyond operation when first seen. Cancer of the cervix is readily diagnosed, but cancer of the fundus is not, and may be very difficult. Dr. Marcy says cut out a piece and examine it, but the disease is out of reach. An early diagnosis can rarely be made, and pain with debility of the patient is present before any conclusion can be reached that would warrant a total extirpation of the uterus.

Where there is degeneration of the mucous membrane with hæmorrhage a curettement can be made and the particles removed, examined by the microscope for malignant changes. More than one-half the patients can be cured by an early operation. Metrorrhagia favors a diagnosis of cancer more than menorrhagia. The fact that menorrhagia is present at the climacteric and later, caused by benign vegetations, explains the reason why it is not considered a serious symptom by many women.

Dr. CUNNINGHAM, in closing the discussion, said there were some reasons why cancer of the uterus should be dealt with more successfully than cancer in other parts of the body. Leopold's cases show a large per cent. living after five years. By making an early diagnosis, good work has lately been done in this field.

ABSTRACTS FROM CURRENT LITERATURE.

BY CHARLES GREENE CUMSTON, M.D.,

BOSTON, MASS.

Hypnotic Medication.

Dr. JASIEWICZ (*L'Union Médicale*, January 4, 1894). Although the review of the paper bearing the above title, read at the Société de Thérapeutique de Paris, may seem out of place in a journal devoted to gynecology, still it is a subject of interest even to specialists, who are often at a loss to know what to prescribe for nervous women, suffering from insomnia due to particular excitations of the

nervous system, without any special organic lesion, as in neurasthenia, the different neuroses, etc., and it is for this reason that I place it in these columns. *Hydrate of amylen*, which is weaker than chloral, was prescribed in potions, at the dose of from three to five grammes, or in capsules of thirty to fifty centigrammes; it is now no longer employed. *Chloralamide* is soluble in nine or ten parts of cold

water, and in one and a half parts of alcohol; it is given in doses of from two to three, and even four, grammes to adults, and fifty centigrammes to children. It should not be dissolved in liquids heated above 60° C., as a higher temperature would change its chemical composition. It is without action on the circulation, the heart, and kidneys; the body heat is not changed, and the rhythm of the respiration remains the same. The drug is prescribed with success in all cases of insomnia, in phthisis, neurasthenia, and in cases of cardiac affections, complicated with albuminuria. Sleep is produced half an hour after ingestion of the drug, and even sooner if it be given subcutaneously, and lasts for seven to nine hours. In cases of acute mania it cannot be employed, for a dose necessary to produce effect would be toxic, and Brocq discourages the use of chloralamide for this fact, and also says that it has the same bad action as chloral on the heart. On the contrary, Wood and Cerna declare that its action on the heart is so feeble that chloralamide should be given in cases of weak heart. Hayem and Huchard admit its usefulness in cardiac asthma.

Chloralose, whose discovery is of recent date, is much prescribed. The ordinary dose of forty centigrammes produces very marked hypnotic effects. Féré prescribes from 0.75 to 1.50 without any bad effects. Marayliano, of Genoa, considers this new drug excellent. Generally, a quiet sleep is produced in half an hour after ingestion, but is accompanied by sweats. The Italian physician advises beginning with ten centigrammes, increasing then by ten centigrammes until the desired effect is reached.

Landouzy, Moutard-Martin, and Marie also cite favorable cases. *Hypnol* is especially employed in insomnia due to pain, when opium is contraindicated; dose, one to two grammes a day. *Hypnone* gives most remarkable sedative effects in the insane, alcoholics, nervous insomnia; the quantity, which should not be over fifty centigrammes, is given at one dose. *Methylal* is given in potion at the dose of one to one and a half grammes in 100 to 150 grammes of liquids; subcutaneously at the dose of twenty-five centigrammes, which may be repeated, thus insuring a long, quieting sleep. It is said to be the best hypnotic in delirium tremens. However, Lemoine gave five grammes without any hypnotic action, and also cautions against cerebro-cardiac accidents produced by this agent. *Paraldehyde* is strongly recommended by Granger as having a favorable action in nearly all rebellious insomnias: dose: from two to three grammes in an aromatic infusion, potion, elixir, or enema, and, subcutaneously, in insomnia of mental origin, delirium tremens, and convulsive neurosis. Even in medium doses this agent has serious inconveniences, and the breath of the patient has a disagreeable odor for several hours, or even several days, after taking the drug. *Somnual* is regarded by Meyer as a good sleep-producer, when insomnia is not produced by sharp pain. *Sulphonal* is only slightly soluble (one gramme in 225 to 240 grammes of water, according to Bocquillon). However, C. Paul was able to show that in the organism, during digestion, the presence of salts and peptones favored dissolution and absorption of the drug. It is perfectly harmless as regards the heart and respiration. Boc-

quillon regards sulphonal as useful in simple nervous insomnia, in delirium tremens, and apoplexy. The great advantage in the use of this agent is that the aptitude of sleeping comes back little by little, and it is only necessary to prescribe it every other day. Huchard has not been pleased with sulphonal; he thinks that its action is long to appear, and the sleep produced is heavy; that there is somnolence with varying degrees of stupor when the patient wakes up, lasting the following day. According to Marandon de Montyel, sulphonal presents more inconvenience than good points in the insane. Bocquillon advises a daily dose of two grammes in cachets, one gramme morning and evening. Brocq, comparing chloral-amide, chloral, and sulphonal, gives his preference to the latter, which acts in smaller doses in cases of acute mania. According to this author, thanks to the prolonged effects of the necessary dose, sulphonal will always conquer insomnia without danger to the patient. In the beginning, it may be prescribed at from three, four, and even five grammes (Mairet), and only one gramme on the following day is necessary for sleep to continue. When agitation reappears, the initial dose is given, and one gramme is again given on the following day. Brocq considers sulphonal as the hypnotic *par excellence* in all cases of insanity without agitation. It is fully established that the use of the drug can bring about serious accidents, even mortal, not only with large doses, but even by small. The continuance of its administration gives rise to gastro-intestinal symptoms, certain troubles called sulphonalism by Professor Lépine, nervous symptoms, exanthema, decrease in

quantity of urine, ringing in the ears, cephalalgia, vertigo, loss of strength, impossibility for physiological or intellectual work, ptosis, œdema of the eyelids, cyanosis, etc. As with chloralose, sulphonal shows its effects more particularly in women. *Thymacetine*, at the dose of twenty-five centigrammes to one gramme, has a real but inconstant hypnotic action. *Trional* is useful as an hypnotic and *tetronal* as a sedative (Mahon). However, these substances can be dangerous, and the symptoms are the same as for sulphonal. *Ural* is well supported by cardinals, and is especially indicated in insomnia due to cough or pain. *Urethan* is like paraldehyde. Opinions regarding it are contradictory. According to Granger this agent is only good in slight insomnia, and while J. Gardin declares its action irregular, W. H. Flint praises its use. Dujardin-Beaumetz says it is a non-toxic hypnotic even in large doses, useful in nervous insomnia and cardialgia, at the dose of three or four grammes. However, at the dose of fifteen, twenty-five, and fifty centigrammes, urethan delays digestion. It is also caustic, and acts as a depressant on medullary irritability. *En résumé*, the author thinks that these new substances cannot take the place of opium and its alkaloids, the bromides, and even chloral hydrate. Of all the new remedies, sulphonal seems the most worthy to take a place in therapeutics. Before having recourse to these new drugs, the physician should inquire into the cause of the insomnia, employ good hygiene, and by this means, aided by some simple remedy, according to the case, try to cure it, not forgetting to attack the cause of the trouble.

Laparotomy for Extra-Uterine Pregnancy.

DR. SMOLSKY (*La Tribune médicale*, March 8, 1894). Nearly all surgeons are unanimous for performing laparotomy for extra-uterine pregnancy. The diagnosis is most difficult, if not impossible, before rupture of the foetal cyst; consequently, when this occurs, the surgeon has an intra-abdominal hæmorrhage to deal with where no hesitation is possible. This is the usual course of events. The operation is performed to stop the acute anæmia, which would soon be fatal. But sometimes the hæmorrhage is not violent and the focus becomes encysted, forming a retro-uterine hæmatocele. Should laparotomy be done when this is the case? Dr. Smolsky has observed a case of this kind in which spontaneous recovery took

place, and thinks that the operation is not necessary. The author gives the following propositions, based on his own case and others derived from medical literature:

(1) Laparotomy is indicated in tubal pregnancy which is diagnosed before rupture of the tube.

(2) It should be performed in recent rupture with intra-abdominal hæmorrhage during the first months of an extra-uterine pregnancy.

(3) A tubal pregnancy terminating in a retro-uterine hæmatocele will probably end in spontaneous recovery. Laparotomy should not be resorted to only when the life of the patient is in danger or if the tumor should suppurate; but even then an opening made in the retro-uterine *cul-de-sac* is to be preferred to laparotomy.

Treatment of Vaginitis.

LUTAUD (*Revue Obstétricale et Gynécologique*, January, 1894). The treatment of vaginitis differs little whether it be simple or specific. The physician should, above all, consider the *acute* and *chronic* vaginitis in the therapeutical point of view. (a) *Acute Stage*. Here the speculum should not be employed. The patient should be kept as quiet as possible, and walking, coitus, and all physical exercise forbidden. Frequently-repeated injections (every six hours) with Es-march's douche with two litres of a one-per-cent. solution of boric acid. Emollient injections, such as starch, flax-seed meal, or decoction of poppy heads, may also be employed. If

pain is severe, one of the following suppositories is given every evening:

R	Ext. opii,	centigm. i.
	Ol. theobrom.,	gms. iv. M.
	Ft. supposit. No. 1.	

This may be replaced by a little injection containing fifteen drops of laudanum. For bladder symptoms (tenesmus, pain during micturition), poultices with laudanum sprinkled over them, bromide of potassium, emollient drinks, and alkaline diuretics are to be prescribed. It is well in these cases to discontinue wine, but light tea may be taken.

(b) *Chronic Stage*. An injection three times a day is to be given with one of the following:

R Acid. carbol., gms. v.
 Alcoholis, gms. x.
 Ess. thym., gtts. xx. M.
 For two quarts of water.

R Hydrarg. bichlor., centigms. xxv.
 Acid. tartaric., gm. i. M.
 For two litres of water.

R Potass. permanganat., gms. x.
 Aq. dest., gms. cc. M.
 A tablespoonful for two quarts of water.

This last is the best remedy for gonorrhœal vaginitis; if it did not soil linen, it would be perfect. In rebellious cases, or when it is necessary to act rapidly, a Sims speculum is introduced and the vagina is painted with a solution of nitrate of silver

(two grammes in thirty grammes of water).

Before withdrawing the speculum, a large tampon imbibed with the following is introduced :

R Acid. tannic., gms. ii.
 Cocain. hydrochlorat., centigms. x.
 Glycerini, gms. cxx.

The tampon should be left in place for two days. No matter what may be the treatment applied in chronic vaginitis, the cure may always be hastened by the vaginal dressings, which isolate the parts and absorb the secretions. Simple dry cotton tampons are good, but when made with iodoform or salol gauze are preferable.

Typhoid Fever during Pregnancy.

DR. EMILE DUHAUT (Lyons Thèse, 1893, review in *Journal de Médecine et de Chirurgie*, January 25, 1894). The author has collected many documents concerning the frequency of typhoid during pregnancy, its gravity, and the results obtained by the cold-bath treatment. A most remarkable fact, brought out by the number of cases in this *mémoire*, is that typhoid fever is infrequent in the pregnant female. Of 1046 cases of typhoid treated by different Lyons physicians only seven were pregnant women. This extreme rarity cannot for the time being be explained, and must be accepted as a simple fact. On the other hand, it appears that the disease attacks women during the first months of pregnancy rather than the last, which, according to Gusserow, might be explained by the fact that there is less danger of exposure to typhoid during

the latter part of pregnancy. When, however, typhoid does occur during pregnancy it may be said in a general way that it is in no way influenced by this condition; but in more than half of the cases pregnancy is interrupted, abortion being more frequent than premature delivery. Interruption of pregnancy takes place ordinarily during the second week of the disease. Abortion or premature labor, as the case may be, may darken the prognosis, from the fact that typhoid facilitates the development of puerperal infection. As to the treatment of typhoid fever during pregnancy by cold baths, Dr. Duhaut has brought together fourteen cases where this method was employed, with the result of saving all the mothers and only three abortions occurring. It appears from this that this treatment is good, and the results

can be theoretically explained. The two great causes of abortion in typhoid are maternal hyperthermia and infection of the fœtus. Now, the cold bath acts by keeping the maternal organism in a state of relative apyrexia during all the febrile period; it can transform a high fever where abortion would be nearly impossible to prevent into a less severe fever with moderate temperature when abortion is more rarely observed. Diuresis, one of the most remarkable effects of the cold bath, provokes rapid elimination of the bacilli and their toxines, lessening the

chance of fœtal infection. The conclusion of these facts is that, contrary to what might be supposed, the cold bath is without danger in these cases. It would appear that this sudden cooling, exercising a vaso-constriction of the peripheric arteries, consequently pushing the blood into the deeper organs, would cause congestion of the uterus, with its attending placental hæmorrhages; but clinical observation shows that internal congestions are not produced by the cold bath, and the number of complications may perhaps be less.

A Case of Difficult Labor Occasioned by an Enormous Distention of the Fœtal Bladder.

SCHWYZER (*Archiv für Gynäcologie*, Bd. XLIII, p. 333) describes a case of difficult labor occasioned by great distention of the urinary bladder of the child, which occurred in the Türicher Frauenklinik, and refers to thirteen similar in the literature. In Schwyzer's case labor could not take place spontaneously, from great distention of the abdomen. The head entered the pelvic canal and then ceased to descend. Upon traction with the forceps the head was torn

off. The abdomen was then punctured and six litres of fluid drawn off, when the body was born with ease. From the reported cases the following is noted: The heart-sounds are very indistinct or not at all to be heard; usually there is an absence of the rectum, the colon opens into the bladder, the urethra is closed, and the ureters and pelvis of the kidney are dilated; in female children there may be a dilatation of Müller's ducts, *i.e.*, the uterus and tubes, with urine.

BOOK REVIEW.

MATHEWS'S MEDICAL QUARTERLY. We have received the first number of this excellent enterprise, which is to be devoted to diseases of the rectum, gastro-intestinal tract, and the surgery pertaining to them. The editor, Joseph M. Mathews, M.D., Professor of Surgery and Clinical Lecturer on Diseases of the Rectum in the Kentucky School of Medicine, is so well known to the profession that the work he has undertaken will be accepted as the best of its kind in the English language, if, indeed, there exists one like it in any other. Professor Mathews has also taken the pains to secure contributions from such men as Allingham, Reeves, and Cooper, of London, Ball, of Dublin, and a host of the well-known surgeons of the United States. The list is too long to enumerate at length, but Charles McBurney, Hunter McGuire, Henry O. Marcy, N. Senn, Charles B. Kelsey, and W. T. Bull figure among them. The original contributions in this number are as follows: A new operation for the cure of strictures of the rectum and sigmoid, by Joseph B. Bacon; acute inflammatory hypertrophic and atrophic proctitis, by James P. Tuttle; the rôle of the sphincter ani in rectal surgery, by

Daniel Morton; some points in regard to operation for cancer of the rectum, by Emory Lanphear; operative technique in classified cases of hæmorrhoids, with a new and safe method of injection, by Charles C. Allison; a plea for more frequent and earlier colotomy in painful malignant disease of the rectum, by Leon Straus; fissure of the anus and painful erosion of the rectum in infants and children, by Henry Koplik; appendicitis, by F. Byron Robinson; the inch-and-a-half incision and week-and-a-half confinement in appendicitis, by Robert T. Morris; the larynx in intestinal disorders, by Frank Woodbury; abdominal sinuses and fistula, by John B. Hamilton; stricture of the rectum, by John B. Bryson; sphincter-omyotomy, by A. C. Bernays; intestinal obstruction, by John A. Wyeth; Kraske's operation and the Murphy button, by H. O. Walker; resection of the rectum, by Henry O. Marcy. All these papers are well worth careful study, and the illustrations and printing are of the best. The work has started brilliantly, and will no doubt continue to be an excellent review on the diseases of which it treats.

C. G. C.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of June 7, 1894.

DR. JOHN C. DA COSTA IN THE CHAIR.

A PROBABLE CASE OF AUTO-INFECTION,
WITH SOME REMARKS ON THE BACTERIOLOGICAL ORIGIN OF PUERPERAL SEPSIS. BY THOMAS D. DUNN, M.D. (See page 569.)

DISCUSSION.

DR. BARTON COOKE HIRST:

I have been much interested in the paper. Dr. Dunn's views with regard to the pathology of puerperal infection are eminently correct, and are announced in a clear and forcible manner. There is no doubt as to auto-infection, employing the term as he has done to designate cases in which the woman infects herself after labor without the instrumentality of the physician's or of the nurse's hands, of clothing, of instruments, or of the atmosphere. Of course, the infection has at some time come from without, but that does not at all invalidate the correctness of the term, for the patient does really infect herself after labor, although the pathogenic germs may have come from without weeks, months, or even years before. Cases are on record in which little patches of erysipelatous inflammation have become encapsulated and have remained quiescent for months or years, and have again broken out into fresh activity under the impetus of pregnancy or childbirth. Again, there are tumors of low vitality which have been subjected to pressure during labor and have become still further reduced in resisting power in consequence. A few wandering microbes find lodgement in the weakly resistant cells of the lowly vitalized tumor, and a septic inflammation begins. These should also be regarded as examples of auto-infection. Cases of rupture of an old pyosalpinx or of relighting of old pelvic inflammation come also under this head.

I must differ somewhat from Dr. Dunn in regard to the relative frequency of sapræmia. In my experience with puerperal sepsis, which has been considerable in hospital and consultation practice, I have found this by far the most frequent variety of puerperal sepsis. The vast majority of cases of sepsis that I see yield within twenty-four hours to antiseptic treatment of the interior of the uterus. This result is only explicable on the ground that there had been a sapræmia, and that as soon as the microbes, their products and their habitat, are removed the symptoms consequent on their presence disappear. No other form of sepsis could yield so readily.

I think it is worth while to point out to the general practitioner that while it should be the rule to adopt this internal disinfection as soon as there is evidence of infection, yet it must be remembered that there is a certain class of cases—septic phlebitis—in which disinfection not only does no good but actually does harm. I remember my own surprise when I first came face to face with this fact, and I am convinced that this proposition is not as widely accepted as it should be. I have seen a temperature of 107° F. follow uterine disinfection, on two successive days, in one case. The disinfection was then stopped and stimulants resorted to, and the woman made a good recovery in the course of a week or two.

We are, I am sure, Mr. President, all indebted to Dr. Dunn for the forcible presentation of this subject, which has not received the attention here that its importance and general interest deserve.

DR. CHARLES P. NOBLE:

There is no question that in a certain proportion of cases we have auto-infection. For

example, a woman came into my office whom I had treated for gonorrhœa five years before. From this she made a good recovery, had a baby and had no difficulty. Recently she returned with a marked vaginitis, and was then seven months pregnant, and was suffering with uterine cramps. I cautioned her as to the risks of miscarriage, and she went to bed and was douched; but two days later she had a premature labor. As soon as I was sent for her genital tract was disinfected as thoroughly as though I intended to do an operation on the uterus. She did not become infected. If this patient had had sepsis, I should have felt that it was due to the septic matter in the vagina. I think that Dr. Dunn is correct, and that auto-infection occurs in a small proportion of cases. I think, as a practical rule in the treatment of our obstetrical cases, that we should investigate the nature of vaginal discharges in the later months of pregnancy. As a matter of routine, I do not employ antepartum douches, but I feel that it is a prudent course to inquire into the character of the vaginal discharges in the later months of pregnancy, and if these are irritating or contain pus, as a matter of prophylaxis, it is wise to stop them by treatment prior to labor, and to use antepartum douches when labor comes on.

DR. GEORGE M. BOYD:

My experience agrees with that of Dr. Dunn, that in a certain proportion of cases auto-infection does occur. Gonorrhœal infection of infants' eyes—ophthalmia neonatorum—develops occasionally in spite of the patient having had the vagina repeatedly treated before labor, and the frequency of this disease is itself, I think, sufficient proof that the vagina is often the seat of various bacteria. It is the custom in the Lying-In Charity to give every patient an antepartum bichloride douche, and it is also the rule, when the patient comes for admission, to make some inquiry as regards vaginal discharge, and if this is present it is treated while the patient is under our care. I feel that the antepartum bichloride douche will, to a certain extent, prevent auto-inoculation, and in institutions, especially teaching institutions, I think that it is a wise precaution to be used in all cases.

To determine whether or not the patient is the subject of infection is, I think, often a

difficult problem. There is nothing more annoying than to meet obstetrical cases that possess some elevation of temperature with perhaps some slight tenderness over the uterus. The uncertainty whether or not there is infection is a source of great anxiety to the physician. It would be wise in all maternities to investigate microscopically the vaginal secretions and lochial discharges, for I am sure that elevation of temperature and other symptoms of infection may come from other causes.

DR. G. BETTON MASSEY:

Before we decide that in a certain case the symptoms are due to auto-infection, we should look into many circumstances. We all know of some things that exist even in the best families. It is difficult to be sure that a nurse has an antiseptic conscience, and if so, that she has the antiseptic knowledge. Again, the frequency with which old rags are saved up to be used for the lochial discharges requires looking into. Again, it occurs to me that it is not safe for a woman to be confined on a mattress made from the hair of dead cows, for in the beating and threshing that the mattress gets during the labor, there is a source of danger. In the case reported, the infection must have occurred prior to labor, as the child also suffered.

DR. E. P. BERNARDY:

I have been for a long time a believer in auto-infection. I firmly believe a woman can carry the poison which will remain dormant until the necessary cause, pregnancy and labor, occurs, when it will lighten up in some form of puerperal trouble.

Some years ago I read a paper before this Society on The Recurrence of Puerperal Fever. It was based on the history of six women, who had in all twenty-three pregnancies, and had suffered with puerperal fever fifteen times. Three of the cases had puerperal fever in three different confinements, while the other three cases had two separate attacks of the fever. Viewed in the light of our present knowledge, I am certain that these women carried the poison in their system in the intervals of their confinements, remaining comparatively well during the non-pregnant state, but the moment delivery occurred puerperal fever was ushered in.

While connected with a maternity, a series

of puerperal cases occurred, which convinced me that the women were infected before they went to the lying-in room. In these cases infection was rapid, and death would sometimes take place within twelve hours. One case was confined at ten o'clock in the morning, and at four o'clock in the afternoon of the same day died. A study of these cases made me a firm believer of auto-infection. Dr. Dunn is certainly to be complimented on the clear and concise paper he has given us this evening.

DR. CHARLES P. NOBLE :

Dr. Dunn has recalled to my mind a paper which I wrote some years ago, and which touched upon this question, that is with reference to the tumor and pus cases and their relation to puerperal inflammation. One of the cases then reported was attended by Dr. Dunn. This woman had had gonorrhœa, and a pus-tube on one side, then had become pregnant, and in the course of the labor the pus-tube was ruptured; she died of purulent peritonitis shortly afterwards. Another case reported in that paper was furnished to me by Dr. Millick, of this city. The history was similar to the one just mentioned. The woman, during the presence of the pus-tube, had one baby. This was followed by peritonitis, from which she recovered. She again became pregnant, and during the labor an immense abscess ruptured into the peritoneal cavity, and she died. I reported other cases, the details of which I do not recall. In looking up the literature at that time I found that there were reported a number of cases of purulent peritonitis due to the bruising of dermoids, fibroids, and ovarian cysts, but none due to rupture of pus-tubes. I think that the cases which I reported were the only ones that I could find. This aspect of the subject is germane to the present tendency of looking upon women as though their chief function was to have children, no matter in what condition their sexual organs are. It seems to me that it is a dangerous thing for a woman to have a baby with pus in the pelvis, for this involves the possible development of peritonitis, and the result is usually fatal.

DR. THOMAS D. DUNN :

I had hoped to hear something with reference to the infection of the child from the

mother, and should be glad to hear of any similar cases that may be known to the members.

DR. BARTON COOKE HIRST :

With regard to infection of the child: I have had a number of such cases under my observation, and I should say that where the infection occurs as early as in Dr. Dunn's case, the point of infection has been the lungs. In one of my cases almost all the joints in the body were infected. The child had an abscess in the sterno-clavicular joint which opened externally and into the pleura, and was the immediate cause of death. In this case the woman was infected during labor, I think, by a careless resident or nurse. The child inspired the infected discharges, and broke out almost directly afterwards with virulent sepsis, which manifested itself by preference in the joints. I have seen one or two other cases in which the joints were the principal seats of attack.

More commonly in my experience the abdominal and pelvic regions were the parts affected. In these cases the point of infection is the umbilicus, the infection usually occurring after the cord has separated, leaving a granulating surface. In one instance that I recall, the whole of the subperitoneal connective tissue was enormously oedematous. The child had a form of erysipelatos inflammation of the pelvic connective tissue without suppuration. In another case there was a large abscess directly beneath the umbilicus. This child lived two or three weeks with all the evidences of serious illness. By exclusion I made a diagnosis of sepsis, and at the post-mortem this was found to be correct. The infecting poison had rapidly penetrated the abdomen through the umbilicus, and all traces of its entrance had been covered by healthy cicatrization. In another case there were abscesses along the course of the hypogastric arteries. In another case, suppuration in the umbilical vein extended up to and infected the liver.

It might be of interest to the practitioner to discuss the diagnosis of these septic infections after birth in the new-born. I have found this rule of practice of considerable value. If I discover a high temperature with evidence of serious disease in an infant just born, my mind reverts to two conditions: one is inspiration pneumonia of an irritative char-

acter, and the other is septic infection. If I find no evidence of inspiration pneumonia in a rapid respiration, I pass to a diagnosis of sepsis. This rule enables me to make a correct diagnosis in the vast majority of cases. Where I am in serious doubt as between these two diseases I always treat the case as one of pneumonia, because I have great confidence in my ability to cure a case of inspiration pneumonia, and I have no confidence at all in my ability to save a child that has been badly infected.

DR. GEORGE M. BOYD :

Dr. Dunn desires some expression of our opinion as to the frequency of septic infection of the new-born. I had a case some years ago which showed septic infection in a manner very similar to the case which he describes. That patient was attended by a very careless nurse. She had a high septic fever, and several days after the child was born I recognized an increase in the size of the left Fallopian tube, which was of the size of a small lemon. The child showed evidence of septic infection two or three days after delivery, and died. The mother after vigorous treatment recovered. I had an opportunity of examining her later, and found a disappearance of this mass on the left side. A year or two later she again became pregnant, probably the other tube remaining healthy.

ONE HUNDRED AND SIXTY CASES OF MEASLES IN PRIVATE PRACTICE. BY EUGENE P. BERNARDY, M.D. (See page 616.)

DISCUSSION.

DR. PRICE, of West Chester :

There is one of the early symptoms that I thought the speaker would refer to. It is one which I have been in the habit of looking for during the past twenty years. This is the eruption on the soft palate, which occurs at least twenty-four hours before the eruption on the skin.

DR. E. P. BERNARDY :

With regard to the eruption on the soft palate, I have looked often for it and failed oftener to find it. Scarlet fever is more positively diagnosed by the eruption in the oral cavity than measles.

I was led to report this series of cases for several reasons. First is that in the numerous epidemic and endemic attacks of measles, I have found the mortality to greatly vary. While I have been successful in keeping down the mortality in this series, I have not always been so fortunate. While connected with the Philadelphia Dispensary, there occurred an epidemic of measles and spotted fever. The cases of measles were of a malignant type, all complicated with severe pulmonary troubles. The little patients would become delirious from the start. The eruption was of a dark-purple color, and the patient would generally die within the first week. In another series of seventy nine cases, seventeen died. The child would be taken sick at ten in the morning, and by one or two o'clock in the afternoon would die. A number will become unconscious, lying in their little cribs as white as alabaster, and death would occur before the eruption would make its appearance. In several of the cases the eruption made its appearance as the little patient was dying. It would be of a purple color. In all of these cases in which the autopsy was made severe, pulmonary complications existed, generally croupous pneumonia.

I would also notice the large number of whooping-cough cases that occurred in the series. I think sufficient to attract our attention and convince us that there must exist some relationship between the two diseases.

Some of my little patients were extremely ill, and in a number I had to take the place, not of the physician, but of the nurse: It was due undoubtedly to my close attention to minute details that aided me in keeping the mortality down to so small a number.

PRESENTATION OF SPECIMENS. BY DR. HIRST.

DISCUSSION.

DR. CHARLES P. NOBLE :

I suppose that all of us have met with twisted pedicles. I recall one seen some time ago where the woman had been treated for several weeks for puerperal fever. I think that the black color which has been referred to is due usually to interference with the venous circulation and to extravasation of blood rather than to necrotic change.

They look as though they were gangrenous, but I think that even if the gangrenous process occurs, it is not usually infectious. It is exceptional that such tumors absolutely become necrosed. Inflammation follows, but, as a general rule, it does not go on to the degree of sloughing.

With reference to the specimen of slow-growing cancer. Exceptionally a cancer may grow in this way. In the uterus they are analogous to so-called atrophic cancer of the breast, a well-known variety of scirrhus, which often lasts for many years. All the old books on surgery advise that these cases be left alone, on the ground that the woman will live a long time with the cancer and a short time if it is removed. I, however, think that Dr. Hirst did right in removing this tumor, as apparently it is confined to the uterus.

The large bottle of pus-tubes which he presents is an evidence that he has not been carried away with the present *furor* of being so conservative (*sic*) as to preserve abscesses inside of our female patients, as has been advocated of late. The doctor's conservatism is to be recommended in that he conserved the woman's health rather than her irretrievably-damaged tubes.

DR. HIRST :

I agree with Dr. Noble that the apparent necrotic process in these cysts is not always the real thing. If, however, the case is allowed to go long enough, I do not see why it should not occur. I have seen it on two occasions after labor. I think that gangrene is liable to occur more quickly after labor than at other times. The reason that skilled operators do not see true necrosis of the tumor is because they operate before it has time to occur. In the cases after labor, we usually do not see the women soon enough, and the gangrenous process occurs before the operation is done. I have had, as stated, two such cases. In one case operation was refused, and the woman died; in another case a distinguished operator refused to touch the woman on the ground that she would die on the table. I operated without anæsthesia, and fortunately the patient recovered. The tumor absolutely stank, and it had to be removed from the room as soon as the pedicle was cut.

Adjourned.

FRANK W. TALLEY,

Secretary.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

ORIGINAL COMMUNICATIONS.

One Hundred and Sixty Cases of Measles in Private Practice.

BY EUGENE P. BERNARDY, M.D.,
PHILADELPHIA.

No disease is more treacherous than measles, being one of the most contagious of all the fevers, with perhaps the exception of small-pox. Its complications and sequelæ are numerous, of frequent occurrence, and often of the most serious nature.

It is far more contagious than scarlet fever. Often a case of scarlet fever will be treated in a family without any of the other children contracting it; rarely does this occur in measles. When once introduced in a family, my experience has been that other members will suffer with it; this in spite of the most careful isolation and separation. I can readily recall the following case, occurring in my practice:

Two children in the same family were taken sick at the same time,—one had measles, the other scarlet fever. The one who had the measles was in the second-story front room, the other, suffering with scarlet fever, was in a room in the back-building, fully forty feet away. Both diseases ran their ordinary course. The first child that had measles recovered and remained well, while the one who had had scarlet fever was within ten days going through an attack of measles.

Measles, when it prevails as an epidemic, is attended with symptoms which it is often not in the power of medicine to control. It has been known to have decimated villages. The Fiji Island lost nearly one-third

of its population. In hospitals the appearance of the disease has been followed by great mortality. The surroundings, improper ventilation, bad nursing, vices engrafted upon the child at birth, syphilis and scrofula, improper feeding, feeding of a large number of children out of the same dish and with the same spoon, all go to so reduce the resisting power of the child that an attack of measles means almost always the destruction of the little patient.

While the disease in private practice is not followed by such high mortality, it behooves the physician to be on his guard.

Through the kindness of J. V. P. Turner, of the Philadelphia Board of Health, I have been enabled to obtain the following statistics of deaths from measles occurring during the first four months of the present year, 1894: January, 9 deaths; February, 29 deaths; March, 26 deaths; April, 26 deaths; in all 90 deaths. This record certainly demonstrates the fact that measles cannot always be looked upon as an innocuous disease.

Investigation has proved the existence of a specific poison, the nature of which has not yet been determined. It is undoubtedly due to the presence of this poison that measles is so highly contagious in all its stages,—incubative stage, pre-eruptive stage, and in its decline,—even up to the third week.

In the present series of cases, where positive data could be obtained, the period of incubation seems to be about ten days. In the case of a physician's child the period from the time of exposure to the ushering in of the first symptoms of illness was fourteen days. This seems to be the

only case of this series, as far as could be ascertained, that the period of incubation extended to fourteen days.

The prodromal stage was usually of four days' duration; in one case it extended to seven days: the case turned out to be a mild attack. The prolonged prodromal stage did not seem in any way to influence the eruptive stage. The eruption appeared first in front of the ears, about the third or fourth day; within twelve hours the face would be covered, then the body, taking about two to three days to completely cover the body. In one case the eruption was well marked on the body, while the face remained perfectly clear. The eruption lasted from five to seven days, gradually fading, first from the face, then the body; in some cases a deep-yellow or rusty-color stain remained, taking in some of the cases between two and three weeks to entirely disappear.

Vomiting occurred in about 10 per cent. of the cases; in several cases was almost unmanageable. The following prescription acted pleasantly, and arrested the vomiting and nausea:

R	Acidi sulphurici dil.,	f ʒ ss.
	Elix. curaçoe,	f ʒ ss.
	Aquæ font.,	qs. f ʒ iii. M.

SIG.—One-half to one teaspoonful in a little water every two hours.

In those cases that pursued the ordinary course, the temperature was seldom taken; in those that were taken before the eruption, the temperature never went over 102° F.; in those in which it was taken when the eruption appeared, the temperature ranged from 103° F. to 104° F.; in all cases where complication existed, especially of a pulmonary nature, the

temperature was taken, the highest was 107° F. This child had whooping-cough, measles, catarrhal pneumonia, and mucous disease of the bowels. It died on the twenty-fifth day.

In the following tabulated series of 160 cases of measles, it will be noticed that the month of January had the largest number of cases (sixty). Generally the disease is more prone to occur in larger numbers in the latter part of February and the months of March and April, extending far into May. In my practice the month of January, especially should it prove to be rainy, seems to be the month in which I have the largest number of measles.

in whom the parents had commenced the treatment by hot whiskey and other warm drinks, smothering the little patients with bed-covering and hermetically sealing the windows, not allowing any fresh air to enter the sick-chamber.

We know measles is always accompanied with catarrhal trouble of some form and that it forms one of its serious complications, commencing as a bronchitis and gradually, often suddenly, assuming the most severe form of broncho-pneumonia. I have included in my series of pneumonia all those cases of severe bronchitis that were doubtful. In young children, as it is often impossible to differentiate a severe bronchitis of the

Measles.	Number of cases.	Simple.	Broncho-pneumonia.	Pneumonia.	Pneumonia and pleurisy.	Whooping-cough during the attack.	Whooping at the decline.	Chicken-pox during the attack.	Acute nephritis.	Thrush.	Mucous disease of the bowels.	Enlarged glands of jaw.	Tonsillitis.	Died.
January, 1894	60	30	12	6	..	4	5	2	..	..	1	..	..	1
February, 1894	50	30	8	3	..	2	5	..	1	1	..	..	..	1
March, 1894	30	20	5	1	..	1	2	..	..	..	..	1	..	..
April, 1894	20	10	3	2	1	..	2	..	..	..	..	..	2	1
Total	160	90	28	12	1	7	14	2	1	1	1	1	2	3

AGES OF THE CHILDREN.

One week	1
Six months	10
Eight months	10
One year	20
Two years	30
Three to five years	40
Six to eight years	25
Ten to twelve years	24

We have here 160 cases, 53 $\frac{1}{8}$ per cent. of which were uncomplicated, many became complicated even after the most careful nursing and treatment. The worse cases were those

smaller tubes from broncho-pneumonia, such cases I have included under one name.

This complication (broncho-pneumonia) generally occurred about the

fifth day of the disease, some almost at the commencement while others at the decline; those at the declining stage were often croupous pneumonia, oftener an aggravation of a bronchitis of the smaller tubes of the lung, which had occurred during the eruptive stage.

What seemed to be remarkable was the fact that the pneumonia did not apparently influence the eruptive stage of the measles; the eruption would run its usual course and fade away gradually; there was no dark-colored eruption so often seen when measles is complicated by pneumonia.

The twelve cases of croupous pneumonia occurred during the disease in its eruptive stage; several of these cases I did not see until after a sickness, practically without treatment, of several days. In one case, the parents of the child sent for me simply to prevent the neighbors talking, the child was in the fifth day of the eruptive stage, with a temperature of 105° F.; short, quick breathing; on examination of the chest, the right lung was found completely solidified; the measles ran its course, but the pneumonia proved somewhat stubborn to treatment. The child recovered.

Whooping-cough occurred three times before any symptoms of measles were apparent; four cases occurred during the attack, and fourteen almost immediately after the convalescence. The relation of this disease to measles has been a disputed point; some writers claim there is no connection between the two diseases other than that of their accidental association, but twenty-one cases in a series of 160 measles, it must be allowed, give us sufficient data to believe there must be some relation

other than accidental between the two diseases.

In the cases which occurred before and during the height of measles, the whooping-cough did not seem to intensify or modify the measles, nevertheless, it was a source of anxiety, and I was relieved when the measles was cured and I had only the whooping-cough to contend with.

When the case became complicated with pneumonia, as it did in several of the cases, the whoop seemed to be greatly modified and held in abeyance until the pneumonia trouble was relieved, when the distinctive whoop would reappear, and the disease run its course.

I first tried bromoform in the treatment of this complication. I soon threw it aside as I considered it both unsafe and useless; belladonna, pushed to its physiological effects, acted nicely in a number of the cases; when this failed, which it often did, picrate of ammonia was employed with perfect success in almost every case.

It is the general belief that if two eruptive fevers occur in the same person at the same time, the stronger will run its course, modifying the weaker one. In the two cases of varicella, occurring in this series, both diseases ran their course at the same time, seemingly without interfering with each other. Convalescence was somewhat prolonged; tonics, containing small doses of sulphate of strychnia, were given with good results.

One case of nephritis (acute) occurred; the child was of a tuberculous family; the nephritis was arrested, the child was sent to the country, and two months afterwards developed acute phthisis, of which it died.

The cases of tonsillitis ran their course; occurring towards the declining stage did not modify the measles in any way.

The first death occurred from numerous complications. The child, aged 18 months, of a tuberculous family, two months prior to its attack of measles developed symptoms of meningeal trouble; as the disease was gradually coming under control with a fair prospect of recovery, contracted measles from his sister; about the sixth day a distinct whoop was noticed, and in a few days whooping-cough set in; about the second week of his sickness catarrhal pneumonia declared itself, which readily yielded to treatment; the whooping-cough continued, suddenly a diarrhœa set in, which ushered in an attack of mucous disease of the bowels; the child, in spite of all, seemed to be gradually regaining his strength, when suddenly a slight convulsion occurred, in which he died.

The second death was a male child, 8 months old; was first taken with a slight bronchitis, which gradually merged into whooping-cough in about four days; the child became feverish, droopy, which condition continued three days when the eruption of measles showed itself; catarrhal pneumonia set in about the sixth day of the eruptive stage; the child continued very sick for several days, when the fever abated, the lung gave signs of clearing up, when a twitching of the muscles of the arm set in; three hours afterwards it died.

The third case of death I saw towards the end of the illness; three weeks prior to my seeing it, she had had measles and had received no medical treatment, the grandmother giving it warm drinks, etc. On the ninth day the eruption had disappeared, but the child instead of being better was worse; a physician was called in and discharged after a few days' attendance, because the child was not improving. Another physician was called, who, in a few days, met the same fate as the first. I then saw the little patient; she was delirious, tongue coated with a thick, black crust; temperature 106° F., pulse 140. The right pleural cavity was filled with fluid, while the left lung was found to be in the second stage of pneumonia; the child lingered for a week and died.

The complications met in these three cases were formidable, and nothing less than a miracle could have saved life.

I am satisfied that my success in the above series of cases was my insisting on the minutæ of nursing and treatment being carried out. My treatment of the measles proper was simple, always bearing in mind that a child's stomach was never made to be a drug-shop. When complications arose, I then used freely whatever medicine was necessary; stimulants were given sometimes in large doses without hesitation when the necessity demanded.

ABSTRACTS FROM CURRENT LITERATURE.

Paralysis Agitans in a Young Subject.

LANNOIS (*Lyon Medical*, April 8, 1894) reports the following case: A lad of 18 years, previously healthy, had measles when 11 years old. The following year he was attacked with regular rhythmical tremors of the upper and lower extremities. The movements were increased by emotional excitement, heat, and cold, but were uninfluenced by voluntary effort. In walking, the patient assumed the classical attitude of Parkinson's dis-

ease, the head fixed, the trunk inclined slightly in advance, the arms swinging, the hands flexed, and the thumbs in apposition with the fingers. The cranium was not deformed, but the general appearance was infantile, the genitals being undeveloped, and the face and pubis without hair. In the absence of any hereditary taint or history of nervous shock, the cause of the disease was attributed to measles.

Tetanus Complicating Vaccinia.

TOMS (*Medical News*, February 24, 1894) reports the following case of tetanus complicating vaccinia: A female white child, aged 5 years and 5 months, of a strumous diathesis and neurotic temperament, was carefully vaccinated with a fresh ivory point of bovine virus under strict antiseptic precautions. The bandage was not removed for several days. The resulting ulcer was dressed with vaseline, which was taken from a partly-used bottle. Eighteen days after the operation the child became indisposed, the temperature 100.5° F., the bowels sluggish, and the appetite poor. The ulcer at this time was about the size of a silver 50-cent piece, deep, and containing a quantity of sanious pus of a very fetid odor. There was no swelling of the arm, tenderness, or enlargement of the axillary glands. The child rapidly improved, the size of the ulcer dimin-

ished, and the granulations became quite healthy. Six days later, while out walking, she was seized with pain in the throat, and on returning home developed typical symptoms of tetanus, death resulting on the fifth day of the attack. The author concludes that the possible source of infection might have been from the vaseline, the sponge used in washing the ulcer, or the unsterilized dressings; or that infection may not have taken place through the vaccine wound at all, but through an abrasion of the mucous membrane of the mouth, as the child was suffering at the time of the attack with severe aphthous stomatitis, and since, moreover, a bacteriological examination of the pus from the arm gave negative results. Dr. Billings, of the Army Medical Library, has gone over the literature of the subject, and finds recorded six cases, all of which were secondary infections.

Sodium Benzoate in Inflammatory Affections of the Throat.

LIEGOIS (*Deutsche medicinische Wochenschrift*, No. 10, 1894) speaks very highly of benzoate of sodium in the treatment of acute pharyngitis. Seventy-five grains constitute the daily dose for children. It is stated

that the pain and dysphagia disappear in the course of a few days. It was equally efficacious in the treatment of laryngitis and bronchitis, but was without effect, both as topical and internal remedy, in diphtheria.

Heart-Disease in Children.

COLEY (*British Medical Journal*, November 25, 1893) states that mitral regurgitation is extremely common in children, much more common than would be supposed by any who are not accustomed to observe and record physical signs with more than ordinary minuteness, and very much more common than is found to be the case in adults. In many cases the mitral incompetence is without any deformity of the valve-curtains themselves. It is a clinical commonplace that rheumatism in children affects the heart more frequently than in adults, and that the joint affection is usually milder in children. But this is only a small part of the truth. Cases certainly do occur in which acute endocarditis or pericarditis may be the only local manifestation of an attack of acute rheumatism, there being no joint affection at all. The only explanation for the extreme frequency of signs of mitral regurgitation in children, so greatly in excess of that which is observed in adults, is that in a very large proportion of cases the mitral incompetence disappears in later life. Doubtless, in many instances the condition producing the phenomena is readily recoverable,—a regurgitation through the mitral valve

produced by dilatation of the left ventricle. In chlorosis such dilatation seems to be quite common, 123 cases out of 400, under the author's care, revealing a systolic *bruit* at the angle of the scapula, as well as at the apex. It is not at all likely that the tiny vegetations observed on the edges of the valves in chorea interfere with closure of the valves and produce *bruits*, and ventricular dilatation is certainly a more satisfactory explanation of the murmurs heard in these cases than irregular or choreic action of the *musculi papillares*. The author concludes, "It should never be forgotten that, when signs of mitral regurgitation occur in the course of acute rheumatism, this is not necessarily due to endocarditis and its consequences. In a large number of instances temporary dilatation of the left ventricle offers the more reasonable explanation. This suggests that all such cases should be treated by prolonged rest, with heart tonics, including iron. Even where actual valvular deformity exists, prolonged rest gives perhaps some chance of complete recovery, and certainly affords the best opportunity for the establishment of satisfactory compensation."

Typhoid Fever Communicated to the Fœtus.

JANISEWSKI (*Presse Médicale*, March 24, 1894) cites the case of a woman, eight months pregnant, who was admitted to the hospital with typhoid fever, the diagnosis being confirmed by a bacteriological examination of the stools. Twelve days after admission she gave birth to a child, which

lived until five days old. Post-mortem examination revealed no lesions except enlargement of the spleen. Cultures, however, from the spleen, intestine, mesenteric gland, kidneys, and lungs produced typical typhoid bacilli.

Otitis Complicating Children's Diseases.

RASCH (*Hospitals-Tidende*, Nos. 18-20, 1893) found in sixty-one autopsies on children under 2 years of age that in only five was the middle ear unaffected. Seventy-five per cent. revealed suppurative inflammation in one or both ears, and 14 per cent. catarrhal inflammation. In most of the children who had died of bronchopneumonia an otitis was found, and

in thirty-three out of forty-three, in which a careful examination was made, the pneumococcus was present. In many of the children a diagnosis of meningitis had been made, a condition which did not exist, the otitis having been entirely overlooked. Perforation of the tympanic membrane was discovered in but few cases out of the fifty-four affected.

The Treatment of Empyema in Children.

SCHÜTZ (*Therapeutische Monatshefte*, J. 8, H. 2, 1894) reports eighteen cases of empyema in children treated by resection of one or more ribs. All but two recovered, and these were in children under one year old. The operation was performed as soon as the diagnosis was made. The ribs were resected as close as possible to the vertebral column. After the operation the pleural sac was irrigated with a warm solution of boric acid.

The drainage-tube, of considerable size, was allowed to remain on an average twenty-four days, the wound healing generally within six weeks. The operation was always well borne. The prognosis of operation in early childhood is not good, but siphonage is inapplicable on account of the liability of the tube to slip out, and the mortality under an expectant plan of treatment had been 80 per cent.

PÆDIATRIC THERAPEUTICS.

AN APPLICATION FOR IMPETIGO CONTAGIOSA AND ECZEMA PUSTULOSUM.

- R Salol,
Ether, of each 15 parts.
Cocaine hydrochlorate, 1 part.
Collodion, 100 parts.

SIG.—Apply externally.

—*Jour. de Mal. Cut. et de Syph.*

FOR SPASMODIC CROUP.

- R Vin. ipecac., f 3 i.
Tinct. aconiti, ℥ ii.
Syr. toltan., f 3 iii.
Liquor ammon. acetat., f 3 i. M.

SIG.—A teaspoonful every hour until cough is loosened, then every two hours.

—*Malloway.*

A USEFUL LOCAL APPLICATION IN ACUTE ARTICULAR RHEUMATISM.

- R Salicylic acid, 1 part.
Turpentine, 1 "
Lanolin, 1 "
Lard, 8 parts.
—*Bourget.*

FOR DISINFECTING THE SICK-ROOM IN DIPHTHERIA.

- R Ol. eucalypt.,
Acid. carbol., āā 3 i.
Ol. terebinth., 3 vii. M.

SIG.—One tablespoonful of this mixture is added to a quart of water, and is allowed to simmer constantly near the patient. This mixture may also be employed by saturating towels, and placing near the patient.

—*J. Lewis Smith.*

TERPINE IN ACUTE BRONCHITIS.

- R Terpene, 0.50
Syrup of catechu, 30.00
Alcohol, 30.00
Water, 100.00 M.

SIG.—A teaspoonful every three hours for a child of 10 years.

—*Dujardin-Beaumetz.*

INCONTINENCE OF URINE.

- R Tinct. belladonnæ,
Tinct. cubebæ, āā f 3 ii.
Tinct. nucis vom.,
Tinct. rhois aromaticæ, āā f 3 i.
Tinct. cascarillæ, f 3 ii. M.

SIG.—Twelve drops at bedtime for a child from 7 to 10 years.

—*Medical Press and Circular.*

TONSILLITIS.

- R Ol. eucalyptus glob., ℥ xv.
Spt. camphor, f 3 iss.
Tinct. guaiac., f 3 iijs.
Glycerin, q.s. ad. f 3 j. M.

SIG.—Ten drops on sugar to dissolve in the mouth, every hour or two.

—*Miles.*

FOR THE INSOMNIA OF THE INFECTIOUS FEVERS.

- R Chloralamide, 1 gm.
Liquor ammon. acetat., 12 gms.
Syrup., 20 gms.
Aqueæ, 40 gms. M.

SIG.—A teaspoonful every four hours for a child of 3 years.

—*M. Marcus, in Semaine Médicale.*

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ORIGINAL COMMUNICATIONS.

Six Years' Experience in Shortening the Round Ligaments for Uterine Displacements.

BY HENRY PARKER NEWMAN, M.D.,

CHICAGO.

THE principle upon which the shortening of the round ligaments for uterine displacements is founded—not, as many writers take for granted, of suspending the uterus, but of using the ligaments as guy-ropes to steady the organ in its normal anteverted direction, and bring it into auxiliary relation with the natural retentive forces of the abdomen—commended itself to me early in my experience as a gynæcologist, and very soon after it was brought to the notice of the profession by Drs. William Alexander, of Liverpool, and J. A. Adams, of Glasgow.¹

After careful study of the method then in vogue, it was evident to me that until certain difficulties in technique could be overcome the operation would be slow to meet with the general approval and acceptance which its merits deserve.

In connection with Dr. J. Frank, attending surgeon to the St. Elizabeth Hospital, I made experimental dissections upon the cadaver, with the view of testing the strength and suitability of the ligaments to do the work proposed for them, also to ascertain if there might be any foundation for the statement, which was at one time urged against the procedure, that the round ligaments were not constantly

operation, however, and his *confrères* received the suggestion as impracticable and full of serious difficulties and dangers in its execution. So that now, in deference to our French contemporary, we are beginning to hear of the "Alquié-Alexander-Adams operation." It will be for the benefit of surgery when the old nomenclature and with it the old technique is dropped

¹ For some time this procedure was called the Alexander operation until Dr. Adams was proved to have very substantial claims to a share of the honor, when it was rechristened the Alexander-Adams operation. Lately it has been shown that the idea originated in France in 1847, when Alquié presented to the Academy of Medicine the thesis entitled, "Sur une Nouvelle Meth. pour Trait. les Diver. Déplacements de la Matrice." He did not report having performed the

present, and that a large number of women, particularly Canadians,¹ were without them.

Dr. Frank suggested the modification which I elaborated in practice, and have found so far superior in accomplishment and results to the original that I have taken every opportunity to urge it upon other operators.

The advantages which I claim for the "new or direct method" can best be shown by a *résumé* of the objections which are still brought forward by good authorities whenever the propriety of shortening the long ligaments is under discussion, and which to some extent were admitted even by Alexander himself, when he said, "This . . . appears to be very simple, but in its performance many failures have occurred,"² and "such I consider to be the most perfect method of doing the operation at the present time."³

That there was room for extensive improvement upon that method may be gathered from the published reports of some prominent operators, who, in following his directions, have at times wholly failed to find the round ligaments.

Specifically, the main objections have been, first, that the operation was unscientific, in that it was not the round ligaments which were at fault in retrodeviations of the uterus, but chiefly the sacro-uterine ligaments.

To this Dr. Henry T. Byford well replied,⁴ "This objection is rendered untenable by the fact that, when we draw the fundus forward, we restore

the normal direction of the uterus with reference to abdominal pressure, although the whole uterus may be a trifle forward of its natural location; and by the fact that, after the os is rotated backward, the sacro-uterine ligaments tend to retract and regain their supporting function."

Second, we have (a) the difficulty of finding the round ligaments; (b) the possibility of breaking them; (c) their absence.¹

(1) Is disposed of in the method which I practise by cutting down upon the inguinal canal directly over the internal ring.

(2) The possibility of rupturing the weakened fibres of a ligament which has been pulled about, frayed, and separated by a half hour of searching and "scratching about"² among its divergent terminal filaments, is no longer to be feared when it can be seized about the inguinal canal, and the force brought to bear upon it is in a direct line with its intra-abdominal course, and not at an angle, as in the operation at the external ring.

(3) That the ligaments are ever absent has been finally settled in the negative, and by those who were mainly the supporters of this peculiar view in times past.

The round ligaments are muscular structures, continuous with the muscular structure of the uterus, and about as likely to be absent as that organ itself in the average female.

Their inability to sustain the replaced uterus has also been argued against the shortening of these structures; but the testimony of some operators to the effect that they have secured good results in cases where

¹ Transactions Ninth International Medical Congress, Vol. II, p. 773.

² *Ibid.*, p. 744.

³ *Ibid.*, p. 746.

⁴ Jour. Am. Med. Association, March, 1888.

¹ Trans. Am. Gyn. Soc., Vol. XII, p. 499.

² Trans. Ninth Internat. Cong., Vol. II, p. 744.

they had been able to find and shorten but one ligament, and that none too stout, tends to confirm what I have demonstrated on the cadaver, that a relatively slender cord will sustain a much greater weight than is ever likely to be imposed upon it.

Add to this the fact that the uterus is not suspended by the ligaments, but held forward in the position most favorable to the recovery of muscular tone.

As for the dangers of the operation. A very few deaths have been reported, some of them before the days of aseptic perfection in surgery,¹ and confessedly due to preventable causes; others having so little relation to the operation as a causal factor that it is manifestly unfair to quote them in argument against it.

Dr. Cushing's² case of fatal peritonitis after shortening of the round ligaments was one in which there existed infective disease of the rectum, and his investigations at the autopsy convinced him that the poison was carried by the hand of an assistant into the cervix, and thus into the peritoneum *via* the Fallopian tubes. Since the entire region all about the wounds was found absolutely free from all infective products, it is manifest that this result might have occurred in this particular subject had the uterus been raised simply to adjust a pessary.

One case of death from tetanus has been reported, and one or two from pyæmia, from disturbance of the dressings and soiling of the wounds by the patients themselves.

There is no surgical manœuvre in-

volving an incised wound in any situation which is not open to the same argument, and I know no plastic pelvic or gynæcological operation which is more free from such dangers than this.

Alexander says, "I would no more expect a death from it than I would from the amputation of a finger."

The one fatality among my own cases would have been as likely to occur under the circumstances had it been an operation upon the hand or foot, since death was so obviously the result of unrelated circumstances.

Boston operators profess to find an element of danger in the prolonged anæsthesia which is rendered necessary by the protracted search for the ligaments.

Blake¹ considers three-quarters of an hour as less than the average time required to find the round ligaments in Boston women, and advises that only one be shortened at a time, making a second operation for the other within a week or two.

This course has its advocates also among our French writers, and is undoubtedly proper so long as a tedious and protracted method of operating is practised.

Before considering the probability of hernia following the operation, and the objection, which has been a really serious one, of the disagreeable tension and pain in the wound from Alexander's method, let me describe the essential features of the modification which I have found sufficient to overcome all former difficulty, and render the shortening of the round ligaments one of the facile and satisfactory procedures of modern gynæcological surgery.

¹ Such, for instance, as Bozeman's case, in *Trans. Am. Gyn. Soc.*, 1893.

² *Trans. Am. Gyn. Soc.*, 1893.

¹ *Boston Med. and Surg. Jour.*, 1893, CXXVIII, p. 89.

Under full aseptic and antiseptic precautions, I begin the operation by making an incision an inch and a half or more in length, parallel with Poupart's ligament, and directly over the canal of Nuck, which is midway between the spine of the pubis and the anterior superior spinous process of the ilium.

No dissections are necessary; this initial step exposing the glistening aponeurosis of the transversalis muscle.

(In the subcutaneous fat, near the middle of the wound, will be found the epigastric vein, which may be ligated or picked up with artery forceps, cut across, and used as a guide, lying as it does directly over the canal of Nuck.)

Through a single nick in the course of the separated fibres of an aponeurosis the blunt hook may now be passed into the canal, and the round ligament, which will be seen as a whitish, slightly-flattened, cork-like structure, pulled out in less time than it takes to tell it.

In any case where the operator may not be confident of his ground, the identity of the ligament may be established by lengthening the incision to expose it along the canal in its entirety, or, if further confirmation is needed, an assistant should be directed to draw the uterus backward by the sound or finger, when the tension upon the ligament can be seen or felt in the wound, and will sufficiently differentiate it from the surrounding tissues.

When we have secured the ligament of one side, we proceed in like manner upon the other, and, drawing upon both ligaments, expose in the canal of Nuck a reflection of the peri-

toneum surrounding the ligaments like a glove-finger.

This should be stripped back until the ligament can be drawn well out and the uterus sharply anteverted.

This gives us a loop of ligament on either side, about four inches in length, to be disposed of by stitching the proximal ends together, and anchoring them firmly to the aponeurosis and walls of the canal, by buried animal sutures, care being exercised to avoid strangulation or disturbance of its nutrition.

The wound is closed with one series of silkworm sutures made to include the walls of the canal, the aponeurosis of the external oblique, and the superficial coverings.

Permanent dressings are applied, and only removed in case of special indications.

Patients are kept in bed three weeks or more, until firm union of the incised structures has taken place, and precautions against over-exertion or straining of the parts are insisted upon for as many months.

The advantages of this method of shortening the ligaments are essentially as follows, and are mainly due to the situation of the wound.

(1) The short time necessary to recognize and secure the ligaments does away with the dangers of prolonged anæsthesia, and the liability to wound or destroy its fibres in protracted search, since at this point where there are few or no adhesions there should be absolutely no testing of the tissues.

(2) The force used in pulling out the ligament is brought to bear upon it at its strongest portion and is in a direct line with its intra-abdominal course. This is in strong contrast

to the old mode of pulling upon its frayed terminal fibres at nearly a right angle with its inner and stronger portion and over the sharp resisting surfaces of the ring.

(3) Aided by the sense of sight, and seizing the ligament above the inguinal canal, we can feel sure that we are drawing upon the abdominal portion of the ligament, and not merely stretching its inguinal section.

(4) Having avoided all teasing and bruising of the tissue, with proper attention to aseptic methods, there should always be healing by first intention, drainage is unnecessary, and after-treatment relatively simplified.

(5) Where the ligament is strong and fully developed, as it is in its upper portion, it can be more securely anchored or made fast to the surrounding tissues.

(6) Hernia is guarded against by the deep sutures constricting the canal about the internal ring, insuring firm union where most needed.

(7) The intercolumnar fibres and tissues about the external ring are not interfered with in any way, and this effectually prevents those distressing sensations of tension and severe pain which sometimes continue for weeks afterwards when the wound is situated lower down, as in the old operation.

Inasmuch as this operation has become a routine procedure in my work at the hospitals and clinics, in very many of my cases I have not been able to follow the latter history, and cannot therefore give a complete tabular account of them. I have, however, selected for illustration a few which I consider representative in type, both as to indications and

results, the numbers given having no reference to their occurrence in practice. For obvious reasons I have selected mainly those of some years' standing.

CASE I.—Mrs. L., age 33 years; married twelve years; one child 10 years old. For many years has suffered greatly at menstrual period and is never entirely free from pain in pelvis. Lately (this was in 1888) menorrhagia and metrorrhagia have caused trouble, and profuse bleeding follows introduction of sound.

Uterus large, prolapsed, and retroverted; cervix and perineum torn. Patient was sent to me from a Western State by a physician in whom I have great confidence, and who had given conscientious routine local treatment for nearly two years previous.

March 14, 1888, I curetted uterus for chronic endometritis.

Shortened the round ligaments April 21 with the assistance of Dr. Henry T. Byford.

Recovery promptly, patient being up and about at the end of fourth week, and returning to her country home a month later. Notwithstanding a severe and exhausting attack of typhoid fever during most of June and July, she reported herself in August as in better health than for two years before, and doing her own housework.

In March, 1894, her sister came to me reporting that Mrs. L., whom I have not seen since the time of operation, had been healthy and cheerful ever since until the last few months, when she had been flowing excessively at the menstrual period, so that the loss of blood was having a perceptible effect upon her color and strength.

Suspecting a recurrence of her old

trouble, I directed her to be brought to the city for treatment, and upon examination found a large and very vascular fibroid, evidently of rapid growth, situated at the left cornu of the uterus.

I operated upon this at my college clinic, demonstrating at the same time the excellent position in which the uterus had remained for six years, and its otherwise healthy state.

The tumor grew outward into the broad ligament, necessitating quilting up of this ligament, and was so very vascular that a large number of sutures had to be used before hæmorrhage could be controlled.

The severity of the operation and the anæmic condition of the patient made her recovery somewhat slow; but at this date she is in most excellent condition, and expects soon to resume her former active life.

CASE II.—Mrs. W., 35 years of age; eight children, two miscarriages. More or less of an invalid for ten years.

Uterus retroverted and strongly retroflexed, with some adhesions from former pelvic inflammation. Cervix and perineum lacerated, and considerable pain was caused by attempts to replace the uterus. February 6, 1888, the uterus was dilated for the purpose of straightening, and the laceration of cervix and perineum were repaired by her physician, Dr. R. N. Hall.

The flexion returned, her condition was not improved, and I was asked to do Alexander's operation. May 31, shortened the round ligaments about four inches, using the old method of operating. Some difficulty was experienced in picking up the ligaments, necessitating considerable disturbance of the tissue. There was sloughing

of the wound in this case, referred partly to the teasing of the tissues and partly to the patient herself, who tore away the dressing and infected the wound with her nails.

Patient was extremely nervous and unmanageable, and left the hospital without the knowledge of her physician, who then abandoned the case. Under the circumstances convalescence was tedious and protracted, and her former sufferings were for a time enhanced, some pain being caused by the tension upon the adhesions, which existed at the time of the operation.

Pregnancy ensued, however, with relief from all her unpleasant symptoms. No difficulty was experienced at the birth of the child, a fine and healthy specimen, and when I saw her, in 1891, the mother was strong and healthy, doing her own housework and presenting quite a plump and youthful appearance. Her family physician at that time told me that the uterus was healthy and in normal position. Since that time she has been bereaved of both husband and child; has remarried, and is now keeping a hotel in Indiana.

CASE III.—Mrs. P., aged 36 years, prolapsus or procidentia of uterus of eleven years' standing; ovaries large, tender, and prolapsed, so that a pessary was tolerated with difficulty. Menses irregular, profuse, and painful. Although the mother of a large family, was able to do little or nothing in the way of household duties. When first seen, May, 1888, the uterus was enlarged and heavy, appearing at the vulva, and the effort of straining or bearing down forced it out of the vaginal orifice.

Vagina capacious, rectal and vesical

walls greatly relaxed. Had been under local treatment by a prominent physician during the last two years, but had been growing steadily worse. The operations of anterior and posterior colporrhaphy were advised and performed by me with only partial relief. August 16, shortened the round ligaments, using the new and direct method. The wound healed promptly by first intention. In the fourth week the patient was up, and left the hospital at the end of the fifth, feeling quite well, with the uterus in normal position.

Her general condition improved immediately, and within six weeks the uterus was found well sustained and scarcely resting upon the Hodge pessary, which she has been instructed to wear.

On November 12, I made a careful examination of this patient. Instead of the former condition of procidentia, engorged, heavy, and inflamed uterus, I found this organ healthy, normal in size, measuring two and three-quarters inches in depth, and free from tenderness. The anterior and posterior vaginal walls were in apposition, and the former rectal and vesical symptoms have disappeared.

In strong contrast to her former worn and anxious appearance and emaciated physique she now presents a cheerful countenance, and says she has gained fully thirty pounds in the previous year and a half.

In December, 1893, this patient returned to me complaining of intermittent pain of colicky nature in the right lower abdomen.

I found a femoral hernia, below the site, however, of the old operation and apparently in no way connected with it. Advised operation for radi-

cal cure, but patient refused at first, and when I was afterwards hurriedly called to her home, I was unable to respond at once.

Another physician was sent for, and operated for strangulated hernia. This surgeon did not suspect that any former operation had been done, nor did the patient enlighten him.

She claims to be well, is doing the work of a large family, and has done so for the last six years. I find on careful examination that, although she does not complain, she is poorly nourished and her muscular tone greatly impaired.

There is a slight bulging of the pelvic floor, and some return of the rectocele and vesicocele, though the uterus is held well forward and is healthy. I regard her hernial troubles as constitutional tendencies, due to the debilitated state of the system, and am more than ever convinced of the utility of shortening the round ligaments, since the results can be so excellent even under such adverse circumstances.

CASE IV.—Mrs. E., aged 23; married four years; one child and two miscarriages. Has suffered three years with prolapsus and subinvolution, following the birth of her child; she had also lacerated cervix and perineum, and suffered more or less pain, with constant dragging sensation at the menses and during the entire month. Flow profuse, irregular, and followed by leucorrhœa. Reflex symptoms very annoying and not amenable to the usual remedies. June 1, I operated upon the cervix and perineum, with only slight relief of the reflex symptoms. (The previous treatment of this case, covering many months, consisted in the use of the

vaginal wool tamponnade and postural treatment, likewise without benefit.)

Shortened the round ligaments, August 21, 1888, at the St. Elizabeth Hospital, using the direct method. The operation was followed by no unpleasant symptoms, and at the end of the third week the patient was allowed to sit up, returning to her home at the end of the fourth.

The former distressing symptoms in back and side and her dyspepsia rapidly disappeared. Uterus remained in natural position and involution was soon perfected. The patient was under observation for some time, and her condition continued to be most gratifying, notwithstanding the exacting demands of a life of social and domestic responsibility.

In April, 1889, being in the third month of pregnancy, she overtaxed her strength in fitting up and moving into a new residence and brought on a miscarriage.

She recovered, however, without any return of her pelvic ailments. About one year later she had a second miscarriage, at about the same period of pregnancy, and from, as she says, similar causes. She recovered promptly from each of these accidents, and, in spite of many severe tests by very exacting domestic hardships, she has never needed treatment, nor has she had any recurrence of her old troubles. Her general health has been uniformly good.

CASE V.—Mrs. N., aged 29; married eleven years; three children and two miscarriages; nine years ago began to have backache and bearing-down pains. From year to year these have become worse until she has been incapacitated from the performance of household duties. When first ex-

amined, about January 1, 1888, the uterus was found heavy, prolapsed, and retroverted; cervix and perineum badly torn; both ovaries were enlarged, prolapsed, and tender, so that no pessary could be endured.

In June, 1888, the double operation upon cervix and perineum was performed, and shortening of the round ligaments on August 25, at her home. Though lacking conveniences and trained attendants, the patient's recovery was rapid and satisfactory, requiring but little more care and attention than an ordinary cervix and perineum operation.

In the fifth week after the operation, I found the woman about the house, attending to her duties, but exercising caution, as she had been strictly enjoined. The prolapsed and retroverted uterus—as well as the tender and enlarged ovaries—was found well drawn up, the ovaries being beyond the reach of the finger. No pain was experienced, and the patient considered her recovery complete, although showing some anæmia and weakness from confinement incident to the two operations, and the result of her former condition.

November 20, 1888, she presented herself at my office with uterus in good position, but larger and heavier than normal, with some tenderness at site of the cutaneous incision and along the course of the newly-attached ligaments. Had been exerting herself unduly, and was instructed to continue the use of the pessary, to persist in the postural treatment, and to be more conservative of her strength.

These symptoms disappeared in a few weeks, but, whenever her ambition was allowed to get the better of her good sense during the following

six or eight months, there was some return of her minor ailments. I had a report from this patient in November, 1890, to the effect that she was enjoying the best of health, her general appearance and happy expression fully confirming her assertions.

The uterus showed the slight increase in volume consequent upon having passed through years of chronic inflammation, but its internal measurements were only two and three-quarters inches,—position normal,—and there had been neither leucorrhœa, menstrual derangement, nor any reflex symptom.

April, 1894. This woman has maintained good health during all these years, supporting the family largely by sewing, and has never needed medical attendance since 1888.

CASE VI.—Mrs. G., aged 34; married three years and sterile; former occupation laundress and seamstress; retroversion and prolapsus of fifteen years' duration, with distressing pains in back, dysmenorrhœa, and irregular menses, followed by leucorrhœa.

Was treated for several months at the North Side Free Dispensary, and at her own urgent request the operation for shortening the round ligaments was done August 27, 1888, at the Polyclinic Hospital. In this case healing was so prompt that, being obliged to leave the city for a short time, I yielded to the temptation to remove the sutures—in this instance silk—on the fifth day. I left the case in the care of Dr. C. W. Leigh, who reported satisfactory progress until subsequent dressing on the seventh day. On this day some sudden movement in bed resulted in a slight gaping of the wound upon the left side.

On account of this the patient was kept in bed for the wound to heal by granulation. A slight fistulous opening remained until I reopened the wound and took out one of the buried sutures (silkworm gut), after which there was no further trouble. When discharged from the hospital she was in excellent health and the uterus was in good condition.

September 9, 1889, the woman expressed herself as feeling as well as she ever had in her life; had hardly felt a pain or an ache during the past year; uterus was still normal in position and size; ovaries could not be felt by ordinary digital examination.

November 11, 1890, patient came to my office in answer to my request for a report. Said she has been in excellent health until the great heat of the preceding summer, when her appetite had failed and she had missed her menses in July. As I was absent from the city, she had consulted Dr. Henrotin, who pronounced the results of the operation perfect, said she had no uterine trouble, and referred the suppression of the menses to anæmia. Her condition improved under iron treatment, and the menses returned satisfactorily the following month, since which time she has been entirely well.

CASE VII.—Mrs. S., aged 27; married five years; three children; had retroversion of the uterus and ovarian prolapse; menstruation always painful and often prolonged eight days; pain in back, uterus subinvolved, cervix and perineum torn; patient very much reduced and unable to work. Trachelorrhaphy and perineorrhaphy were performed in June, 1888, and a uterine support subsequently used.

This, combined with vaginal tamponade, extending over a considerable space of time, failed to relieve her distressing symptoms. September 11, of the same year, I shortened the round ligaments at St. Elizabeth's Hospital.

At the end of four weeks the patient was discharged, feeling well and with the uterus and ovaries in good position. She became pregnant in the following March and went to full term without any untoward symptoms.

April, 1894. This patient has since passed through a second pregnancy and labor, everything being propitious except for the occurrence of a tear of cervix and perineum. This has accounted for a condition of subinvolution and chronic endometritis, and the uterus is large in consequence; but since it remains in excellent position she is not conscious of any trouble and is cheerful and active.

CASE VIII.—I was called, on April 10, 1889, to operate upon the round ligaments in a patient whom I had never seen, but who was considered by her attending physician to be a fit subject for the operation. When I arrived, I found a most unfortunate state of things, both as to the condition of the patient and her surroundings.

Her family physician was late in arriving, and it was evident that I was expected to do the operation at once, and as I could not avoid it under the circumstances, I did so rather against my inclination.

The patient, Mrs. S., was a very frail, nervous woman, of 50 years of age, with retroversion and prolapsus of ovaries. Her pelvic troubles were of years' standing and her disposition of

late had been of a melancholic tendency. No difficulty was experienced in operating, but acute mania developed, as an immediate result, I believe, of the anæsthetic. Of course, this made the case an exceedingly difficult one to handle; the dressings were constantly disturbed and suppuration resulted. There were no trained or otherwise competent attendants, and the family were almost as hard to manage as the patient. There was partial recovery, however, and some promise of ultimate cure, but a relapse occurred, and the patient died of exhaustion two months afterwards.

CASE IX.—The particular interest of this case is in the extreme degree of the displacement, the prompt recovery (patient was but two weeks in the hospital), and the permanence of the result.

Miss B., aged 17, had been active in gymnastics, dancing, and trapeze performances since her twelfth year, and in July, 1893, when she presented herself at the college clinic, had retroversion of uterus of third degree with displaced ovaries. She had been treated in the dispensary for several weeks without improvement, and, as she was dependent upon her own exertions for a livelihood, was most anxious for speedy and radical cure. She had suffered for about three months from frequent, profuse, and painful menstruation, backache, and leucorrhœa.

I operated in the amphitheatre of the College of Physicians and Surgeons, January 5, 1893. I was unable to keep this wilful patient in the hospital longer than two weeks. By that time the wounds were nicely healed and the uterus was in good position. So, after inserting a pessary, she was

allowed to go to her home. At the end of the third week she came back for examination and from time to time for two months afterwards. She had been perfectly well ever since, and at the present time is doing the work of a domestic and is on her feet much of the time.

CASE X.—Mrs. W., aged 31; married (this was in 1892) three years; has one child 15 months old. Is by occupation a teacher, and has always been healthy until after the birth of her child. The labor was severe and resulted in laceration of cervix and perineum. Has had severe pain in back ever since, with smarting and pain at the base of the bladder. Symptoms grew worse constantly and were much aggravated by locomotion or any severe exertion.

Upon examination I found laceration of the perineum, with rectocele; cervix torn bilaterally; uterus markedly retroverted, the fundus pressing upon the rectum, while the cervix was directed forward and encroached upon the bladder. Uterus movable but large, congested, and with decided post-cervical tenderness, so much so as to render the use of the usual retroversion pessary intolerable.

This lady came from a distance, and felt that she could not spare the time nor had she the means necessary to undertake any protracted course of massage, electricity, or tamponade, if such should be advised.

April, 1892. I operated upon the patient, doing trachelorrhaphy, colpoperineorrhaphy, and shortening of the round ligaments at one sitting. The condition of the bladder—which was the source of greatest suffering prior to the operation—began to im-

prove immediately after the operation, and at the end of four weeks, when the patient left the hospital, was completely relieved.

Some months afterwards a communication from her husband informed me that there had been no return of the vesical trouble; that his wife was entirely well, and had never had the slightest inconvenience since leaving the hospital, with the exception of an inconsequent stitch-abscess in the perineum.

April, 1894, another letter tells me that Mrs. W. is in the fourth month of pregnancy, and is quite well and happy.

CASE XI.—My first anatomical and therapeutic failure, and the fault of circumstances which sometimes arise to handicap the efforts of the surgeon in other directions as well. I quote it as an exception to prove the rule in favor of the proceeding which failed here.

Miss S. was one of the last cases I have operated upon; a frail, extremely nervous girl of 19 years; poorly nourished since childhood; menses scanty and painful and followed by leucorrhœa; uterus prolapsed and retroverted.

Has been treated, she says, for years with no effect. I shortened the round ligaments in January last in the college amphitheatre. The wound was infected, whether through the carelessness of the operator or some attendant I cannot say, but am certain that the immediate failure of the operation was due to that accident and not to the inadequacy of the procedure. The uterus returned to its prolapsed position, but her general health is less unsatisfactory, I think, than before the operation. I will

report the further progress of this case at a future date.

OTHER LITERATURE.

Mundé, *Internat. Clinic*, Vol. III, 3d S., p. 263

Bleynie, L., *Limousin Méd.*, Limoges, 1892, XVI, 163.

Kelly, *Johns Hopkins Hospital Reports*, 1892-94, III, 343.

Cushing, *Trans. Am. Gyn. Soc.*, 1893, XVIII, 310.

Lanz, *Archiv für Gynäk.*, 1893.

Ultimate Results in the Treatment of Backward Displacements of the Uterus by Pessary, with Especial Reference to the Alexander-Adams Operation.¹

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BOSTON.

SINCE the demonstration by the authors of this operation and the confirmation by numerous observers of the possibility of rectifying backward displacements of the uterus and holding the organ in its normal position by shortening the round ligaments, the question of the treatment of these misplacements has assumed a new aspect.

Up to ten years ago the only method of treatment was by pessary. Where for any reason one could not be worn, there was no radical method that could be used. The physician was reduced to the necessity of palliating symptoms, and trying by various methods of local treatment to overcome the particular obstacle to the use of the instrument. Now this class of cases can be easily and effectively helped by various operations.

Foremost among them, both in pri-

ority of time and in range of applicability, stands the Alexander-Adams operation. Very soon after the publication of this method and its acceptance by the profession, various other operators, stimulated it would almost seem by a desire to exploit something novel and startling rather than to give anything of value to the profession, suggested various other operative procedures. Schücking's method of passing sutures through the anterior wall of the uterus and bending it into a position of ante flexion is an example of this class of operations. Of it and others as extraordinarily unsurgical it is not necessary to speak.

The Alexander and ventrofixation are the only ones which have stood the test of time, and I only mention the latter because some operators seem to consider that the indications for the two are identical. To define my position on this matter at the outset, I consider the Alexander operation as only applicable when the

¹ Abstract of paper read before the American Gynecological Society, Washington, 1894.

uterus is freely movable and can be replaced, while ventrofixation in the vast majority of cases is done secondarily in the course of operations for other pelvic lesions, or if done primarily is limited to the very rare cases where an adherent retrodisplaced uterus is the sole cause of the patient's sufferings.

Therefore, to my mind, ventrofixation and the Alexander method never need be considered together.

The question which confronts us to-day, when a patient presents herself with a simple case of retroversion or retroflexion, is, Shall we advise the use of a pessary, or shall we recommend the operation for shortening the round ligaments? To decide this point certain facts must be taken into consideration.

First, as to the objections which are usually raised to the use of the pessary. One of them is the difficulty of fitting a pessary that shall be comfortable. I am confident that this is a much overrated objection. In the hands of the skilful gynæcologist the number of cases in which a pessary cannot be borne is very few, not more than 2 or 3 per cent. Where there is difficulty it is because some complication exists, which would render the case unsuitable for treatment by pessary, and would in all probability rule out the Alexander operation as well. All that is needed is skill in choosing the form of pessary best adapted to the particular case, and patience in so modifying it as to overcome the special obstacles.

A second objection is that a pessary is a foreign body, is a constant source of irritation, and is liable to cause abrasions and ulcerations. This ob-

jection can be met by systematic care of the pessary after it has once been properly fitted.

A third objection is that the wearing of a pessary entails the more or less frequent use of douches, and occasional visits to the physician while it is being worn. This has weight in the case of patients to whom any local treatment is a source of annoyance, and who dislike the feeling that they are wearing something which they cannot attend to, and which requires the services of a physician at regular intervals.

The last objection is that the method of treatment by a pessary is simply palliative, not curative, and that the patient is practically doomed to wear an instrument for life.

This is the most important claim that can be urged against the treatment of backward displacements by pessaries, and upon our ability to settle the question involved will depend, in my opinion, the choice of method to be adopted. If it is true that pessaries do not cure and that they must be worn for years, with all the minor objections to their use which I have mentioned above, then the claim for the frequent performance of the Alexander operation will be very much stronger than it otherwise would be.

This is a question which patients ask, and which we must answer. And I imagine that what particular answer we give will depend upon our individual experience to some extent, influenced more or less by our training, and also to some extent by our prejudices.

I think that the most of us would feel justified in assuring our patient that it is by no means a foregone

conclusion that the pessary must be worn for life. We assure her that after the uterus has been brought forward into its normal position and held there for a time, it will tend to remain in its appropriate place; that when she has gained strength and the ligaments have grown stronger she will be able to go without the support; that the womb, having been out of position so long, has become congested and heavy, and if it is held in its normal position, the congestion will be relieved, and the organ will become lighter.

These theories are all very beautiful, but what are the facts in the matter? What proportion of cases of simple retroversion are cured by the use of a pessary? I think that rather erroneous ideas are prevalent on this point, partly from the tendency to blindly accept a statement of some authority as true without sufficient proof, and partly from the natural desire to encourage our patients to believe that what we propose to do is going to have the effect we desire. It is the old story, the wish is father to the thought. Until we can by following up our cases and studying them get facts on these points, we cannot either think the case out intelligently to ourselves or answer our patients' questions satisfactorily. To this end I have looked up the statements of others in this matter, and have also tried to deduce some facts of value from my own cases.

There are two sets of opinions on this subject. The first are of those who, from a general idea of the ordinary run of their cases and the present condition of their patients, and their vague remembrance of the

statements of text-books and articles on this topic, formulate their ideas accordingly. Schultze, for instance, says in answer to the question how long a pessary must be worn, "until the folds in Douglas's pouch can again support the uterus." Fritsch says that definite cure can only take place in recent cases. Hildebrant thinks that a complete *restitutio ad integrum* can be attained in scarce half of the cases.

Gehring,¹ of St. Louis, says, "Pessaries seldom effect a lasting cure, but worn constantly at first and interruptedly at a later period may render the patient perfectly comfortable for lifetime, almost equal to a cure."

Trenholme's² convictions are expressed as follows: "The vices of flexion and position being overcome, a permanent recovery may be looked for with certainty in from six months to a year from commencement of treatment."

These views represent fairly well those held by the first class,—the men who speak from general impressions, and not from a close analysis of facts. When we look for records of observations based on a close analysis of cases, we are struck by the fact that they are comparatively few. However, the conclusions arrived at are so nearly uniform that I think the results may be accepted as practically embodying the real facts.

Mundé³ has gone into the statistics of his own cases quite elaborately. His results are that of 127 cases of backward displacement; he can find but two of positive cure of sharp

¹ St. Louis Courier of Medicine, 1882.

² Obstetrical Journal of Great Britain, 1879.

³ Minor Surgical Gynecology, p. 392.

retroflexion, and five of retroversion, making seven in all. Of course a few more cases may have found themselves benefited by the support, and removed it themselves and remained cured.

Löhlein¹ gives some very careful statistics on this subject from his own practice, and concludes as follows: "Of fifty-six cases of chronic backward displacement, only four were completely cured in the sense that after months the uterus was found in a normal position. In fifteen the position was somewhat improved anatomically, but was not normal."

Fränkel,² out of 294 cases of retroversions and retroflexions, reports twenty-four complete and lasting cures, or about 8 per cent. The length of time of wearing the pessary varied from two and a half or three months to two and a quarter years.

Sänger³ reports seven cases of cure out of fifty-seven cases of chronic backward displacement, which equals 12½ per cent. In sharp contrast with these, to say the least, rather discouraging figures, are some quoted by Dr. Mundé from an article by Dr. F. B. Walkins⁴. He reports 139 cases of retroversion, of which 114 resulted in complete recovery, and nine were partially relieved, only twelve showing no improvement. These five represent all the accurate statistics which I have been able to find on this subject.

It will be seen from their study that where the number of cases treated and the definite cures effected, as shown by repeated examina-

tions, have been compared, the number of the latter is very small. The only exception to this rule is in the case of Dr. Walkins's statistics, which vary so markedly from those of all other observers that I am forced to the conclusion that his standard of cure is not so strict as in the case of the other observers. In fact, after a careful study of his original article, I cannot anywhere find that he exactly defines what he means by complete recovery. At least he nowhere states anything with regard to the removal of the pessary and the ability of the uterus to maintain its normal position without any artificial support. It is, therefore, fair to infer that by "complete cure" he means the rectification of the malposition of the uterus, and its maintenance by a pessary which relieves symptoms and is comfortably borne. I have, therefore, felt justified in disregarding his figures in the conclusions which I draw in this paper.

To satisfy myself as to the percentage of cures in my own cases, I have gone over my records, and taken the last fifty-five cases of simple retroversion or flexion of the uterus which I have treated with a pessary. I have, of course, excluded all cases with adhesions and cases which remained under treatment too short a time to enable me to form any opinion as to cure. I have also thrown out of the consideration five recent cases still wearing pessaries, but in whose case no attempt has been made to dispense with the support. That leaves fifty cases which may properly be considered.

Of these fifty cases there are ten which are cured in the sense that the uterus remains in its normal position without a support, as has been demon-

¹ Zeitschrift für Geb. Med. Gyn., 1882.

² Centralblatt für Gynäkology, No. 42, 1886.

³ Centralblatt für Gynäkology, No. 42, 1885.

⁴ Virginia Medical Monthly of November, 1875.

strated by frequent examinations. There is one more in which I am confident that the uterus would remain forward without a support, in fact the pessary has been out for a short time, but the patient feels safer with it in, and it is allowed to remain.

There are nine other patients who have worn a pessary for a while with benefit; it has then been removed for various reasons, and though the displacement has returned and persists, yet the patients are practically well of the symptoms which led them to consult me. These I call symptomatically cured, and I desire to call especial attention to this class, because it emphasizes the fact which I am inclined to think is often lost sight of that a retroversion may exist without symptoms which are of sufficient gravity to lead the patient to seek advice.

The remaining thirty-one are unable to go without the support without a return of the displacement with its symptoms, and have been wearing their pessaries for a length of time varying from one to ten years.

My statistics give 20 per cent. of absolute cures. This is a rather better showing than the other statistics reported, but is, I imagine, less than would generally be supposed to be the case.

To sum up the results of the several observers, as far as they have been accurately given, we have,—

	Cases Treated.	Cured.
Mundé	127	7
Löhlein	56	4
Fränkel	294	24
Sänger	57	7
Davenport	50	10
	<hr/> 584	<hr/> 52

—that is, a little over 11 per cent. of all cases treated were cured.

If our interpretation of cure is not so strict, and if, as I think we have a right to do, we are willing to include in our favorable judgment of the value of the pessary those cases where symptoms have been relieved by the use of the pessary, though the displacement has returned, our results will be more favorable. Thus, in my cases nine, or 18 per cent., are practically well, though the uterus is still retroverted. These should, I think, be added to the credit of the pessary. Very likely a somewhat similar proportion of relative cures would be found by other observers.

But even with the most favorable interpretation, there remains the fact that at least 75 per cent. of backward displacements are dependent upon the pessary for relief of symptoms, and are obliged to wear it continuously or suffer.

It is interesting to inquire how long, in the cured cases, the pessary was worn. One patient wore her pessary for nine years, one attempt having been made in that time to go without it and failed. One was cured only at the end of 3 years, 1 at 2½ years, 1 in 1½ years, 4 after wearing it a year, and 2 for a period of less than a year.

Length of time the pessary was worn,—

1	9 years.
1	3 "
1	2½ "
1	1½ "
4	1 "
1	10 months.
1	6 "

Of the cases which were symptomatically cured, 1 wore her pessary 6 years; 2, 4 years; 1, 3 years; 1, 2½ years; 1, 1½ years; 2, 8 months; and 1, 6 months.

These figures seem to show that, as a rule, if a cure is to be expected it will occur after a comparatively short use of the pessary. Thus, of the ten absolutely cured cases, seven wore the support a year and a half or less; of the nine symptomatically cured, four.

There is, I think, an opinion among gynecologists that, if a retroversion or flexion is associated with a laceration of the cervix or perineum or both, the repair of these lesions will favor a restoration of the uterus to its normal position, and will do away with the necessity of a pessary. Eight of my cases had trachelorrhaphy and perineorrhaphy done; in one there was complete cure, in three symptomatic cure, and in four the pessary has still to be worn. One case where trachelorrhaphy alone was done resulted in complete cure.

It would be interesting to know whether the length of time which the displacement has existed has any bearing on the possibility of cure; but that is obviously impossible to find out. Such displacements occur so insidiously, and probably often are present so long without causing symptoms, that no reliable deductions can be drawn. My opinion, however, reasoning on general principles and from my general impression of the history of the cases, is that the shorter time a displacement has lasted, the quicker and more sure is the cure, other things being equal.

In the light of these figures, which, in view of the variety of observers and the careful analysis of the cases, may be considered as substantially representing the results of the treatment of backward displacements by a pessary, the question arises, In what

way are we to modify, if at all, our prognosis and treatment? As regards the former, we certainly cannot hold out any very flattering prospects of certain or speedy cure. The best that we can say to our patients is that the use of a pessary is followed by complete or partial cure in not more than a quarter of the cases; that there is every prospect that the pessary while worn will relieve symptoms; that if a cure is effected, it will probably be within a year or a year and a half; and that if then there is no prospect of their being able to go without the support, the choice will lie between a continuous wearing of the pessary and the Alexander operation.

In view of this statement of the ultimate results of the use of pessaries in backward displacements, what field does it leave for the operation of shortening the round ligaments?

In my opinion a very small one. The 25 per cent. in which we may confidently expect a cure will certainly not prefer an operation which is itself not sure in its results. Of the remaining 75 per cent., at least five-sixths will be able to wear a pessary comfortably, and in my experience very few women who can be made comfortable with a support will choose to undergo an operation, even though they realize that they may have to wear the pessary indefinitely. I say choose an operation, because I do not think that there are any such radical objections to the use of a pessary as would justify us in advising or urging the operation. Should we do so our patients would undoubtedly submit, such is their confidence in our judgment. But I believe it is right to give them the choice.

There remain, then, as appropriate

cases for the Alexander-Adams operation the very few cases which cannot tolerate a support, the fraction of those who can who prefer an operation, the occasional case of a virgin with intact hymen who is suffering from an uncomplicated backward displacement, and where no vaginal treatment should be attempted, and as a supplementary operation to trachelorrhaphy and perineorrhaphy, in cases of lacerations accompanied with retroversion and prolapse.

If these various indications are strictly adhered to, I do not believe that the percentage of cases of backward displacements of the uterus for which the Alexander operation should be advised would reach 10 per cent., perhaps would not be more than 5.

I would sum the matter up in the following propositions:

(1) In cases of uncomplicated ret-

roversion or retroflexion of the uterus, the choice of treatment lies between shortening the round ligaments and the wearing of a pessary.

(2) A cure, either anatomical and symptomatic, or symptomatic alone, may be confidently expected from the use of a pessary in about 25 per cent. of all cases.

(3) Where a cure is effected, it is usually within a year or a year and a half after beginning treatment.

(4) A large proportion of those not cured can wear a pessary without discomfort.

(5) The operation for shortening the round ligaments should be limited to those cases where a pessary cannot be worn, to those who prefer it to wearing a support for years, to cases where vaginal treatment is inappropriate, and as supplementary to other operations.

Vaginal Hysterectomy.

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PROFESSIONAL opinion has greatly changed upon this subject since the meeting of the International Medical Congress in Washington, in 1887. Then its wisdom was bitterly assailed by Jackson, of Chicago, and but few American gynecologists dissented from his views. Now it is a well-recognized operation, and its opponents are the exception. It is true,

there are still those who advocate in preference the high amputation of the cervix or the use of the galvano-cautery, but the majority concede that where any portion of the uterus is the seat of malignant disease, and it is probably still confined to that organ, the chances for radical cure are enhanced by the extirpation of the entire viscus. Indeed, it would seem as just

to remove the entire uterus when any portion of it is involved as to extirpate a mammary gland when one of its lobes is involved. The general surgeon appreciates the importance of thoroughness in the attempt to eradicate the disease when he removes not only the mammary gland, but the lymphatic plexus of the axilla as well. Fortunately, the lymphatic infection does not seem to take place so early from the uterus as from the mammae, so that not unfrequently very extensive involvement may occur and yet not be associated with secondary deposits.

The operation may be considered indicated in every case in which there is evidence of malignant disease involving any part of the uterus and still confined to that organ, though it be slight in extent. In determining the indications for extirpation for malignant disease, then, we would assure ourselves of malignancy by macroscopic and, if necessary, microscopic examination; ascertain the mobility or fixation of the uterus; and determine the existence of secondary deposits or infiltration in the broad ligaments or in the pelvic lymphatic glands. While we may feel inclined to give a more favorable prognosis when the disease is confined to one point in the uterus, if the latter organ is freely movable and presents no indication that could cause us to suspect extension of the disease, yet fixation of the organ should not be considered a bar to operation. The immobility may result from previous or coexisting inflammatory conditions. Malignant infiltrations can usually be determined from that arising as a result of inflammation by the more extensive involve-

ment and fixation of the uterine and peritoneal surfaces. Where the broad ligament is involved, the rectal examination will usually disclose irregular nodules or projections from the surface, while in inflammatory trouble the exudate is more like that which would result from the solidification of liquid glue which had been poured into the pelvic tissues. Even the involvement of the anterior and posterior vaginal surfaces need not always be a contraindication to operation. The extensive involvement decreases the hope of radical cure and makes the operation less promising, but it is not unfrequently found that such cases subjected to operation recover and remain in good health for some time before there is a return of the disease. In one case in which the writer removed the uterus by sacral resection on the 8th of July, 1891, there was involvement of the cervix alone. About a year later she began to notice an offensive discharge, with occasional bleeding, and came under his observation some two months later. Upon investigation he found an ulcerated surface at the upper part of the vagina, which he considered as a return of the disease. He advised her to submit to an operation, to which she consented. It consisted of the removal of the diseased tissue as far as could be done, and subsequently the cavity was packed with iodoform gauze and allowed to heal. The patient recovered and has had no return of the disease since. Cases have come under observation in which the disease did not return for a number of months, even in cases in which there was extensive involvement, and in one a lymphatic gland as large as an almond was removed from the broad

ligament. This patient recovered and continued in good health for nearly a year, when a redevelopment took place, to which she rapidly succumbed. The prolonged respite secured would seem to justify the operation when consideration is given to the progress of the disease where interference is not practised. It is an interesting question, whether vaginal hysterectomy shall be done for other conditions than malignant disease. In those cases in which it is evident that the uterus is the seat of sepsis and the disease has extended from the uterus to the tubes and ovaries, producing more or less extensive inflammatory infiltration and exudation, the wiser plan of procedure would seem to be the removal of the uterus. It may be questioned, however, whether the better plan is not to remove it through the abdominal cavity, as, by so doing, the different steps of the operation can be better observed and the more thorough removal of the septic tissue ensured. In those cases in which the uterus is the seat of a number of small fibroids, some of which are protruded into its cavity and others developing in its walls, producing frequent and severe hæmorrhage,—hæmorrhage so great as to endanger the life and health of the individual,—it would seem a wise procedure to practise extirpation. This has been done by the author several times, originally, he must confess, under an error of diagnosis, supposing the condition to be malignant disease of the body of the organ. The results have been so satisfactory, however, that he has subsequently felt inclined to recommend the operation in cases of this character as a proper procedure. In procidentia uteri accompanied with more or less

ulceration of the vaginal surfaces, which must necessarily result in cicatricial tissue of low vitality, or in cases in which the uterus is quite large and replaced with difficulty, or where adhesions have taken place between the uterus and the prolapsed intestines or omentum, the removal of the uterus affords the most certain relief. This, however, could hardly be called vaginal hysterectomy, for the reason that the organ is almost extravaginal, the vagina in such cases being completely inverted.

Where the operation is indicated the patient should be placed in bed, and where there is extensive involvement of the uterus, it is preferable to begin the treatment several days prior to the day of operation. This should consist in thorough scraping and cutting away of the diseased and infected tissues, irrigation of the cavity with an antiseptic solution, and firm tamponnement of the vagina with iodoform gauze. The gauze packing compresses the blood-vessels, decreases the tendency to hæmorrhage, affords drainage, removes the offensive discharge, and makes the condition a far more favorable one for operation. The bowels should be thoroughly evacuated and the patient placed upon a liquid diet, from which milk should be excluded for at least twenty-four hours before operation. As a further preparation, the external parts should be cleanly shaven, the vagina and vulva thoroughly scrubbed with a solution of tincture of green soap and creolin, followed by irrigation with sterilized water; the cervix seized with a pair of vulsellum forceps, preferably three- or four-pronged instruments, in order to grasp a larger amount of tissue, and thus make sure of holding firmly

during the process of the dissection. While dragging upon the cervix an incision should be made through the vaginal walls, keeping as remote from the affected surfaces as safety to the bladder or ureters will permit, completely encircling the vaginal portion of the cervix and cutting through the vaginal walls with a knife or pair of scissors, preferably the former. After the vagina is cut through, the tissues are pushed up on all sides, anteriorly between the bladder and uterus until the peritoneum is reached, posteriorly until we reach the peritoneum; the surfaces should be dried, the peritoneum opened, and a sponge or gauze pad, with a tape attached, introduced posteriorly into the peritoneal cavity. This serves the purpose of keeping the intestines out of the way and the parts from being soiled by blood or other discharge.

The peritoneum may then be opened anteriorly, and, where there is any difficulty in determining its limits, the finger may be passed over the broad ligament posteriorly, pushing the peritoneum before it anteriorly, and thus enabling it to be torn or cut with the scissors over the finger. After the peritoneum is opened anteriorly the uterus is held by the broad ligaments. Now, as these contain the vessels, they may be secured either by ligature or by clamp. The latter method is the one the writer has practised and prefers. He uses a modified Greig-Smith clamp, one blade of which is placed posteriorly the other anteriorly to the broad ligaments. When they are placed upon the ligaments and the clamp screwed together, the probability or possibility of hæmorrhage is *nil*. After the clamp is

applied to one side, the tissues may be cut between it and the uterus and the latter delivered. This enables one to more readily apply the other clamp. Care should be taken, however, to see that its end can be returned readily and freely into the vagina without impinging against the anterior wall before it is firmly applied and the broad ligament severed. In the application of the clamps, the ovaries and tubes may be dragged down and placed within the clamp so that they may be subsequently removed. If they are free from disease, however, there seems no special necessity for their removal. After the application of the clamps and removal of the uterus, the sponge placed in the posterior cul-de-sac is withdrawn by the tape or string, the cavity irrigated with hot water, and some iodoform gauze packed into the vagina between the clamps. The gauze tampon should be carried over the end of each clamp to keep the intestines from impinging against them. It serves the purpose, also, of keeping the intestines well up, so that a knuckle of the gut does not come in contact with the raw surface, become adherent, and subsequently subject the patient to the danger of intestinal constriction or strangulation. The gauze packing fills up the vagina between the clamps, and between them externally is applied a gauze pad which can be frequently changed.

After-Treatment.—The patient is placed in bed, the usual means practised to overcome or prevent shock. A good-sized pad is placed beneath her, for the reason that frequently drainage is very free. The urine is preferably withdrawn by the catheter. After the patient recovers somewhat

from shock, it is better to elevate the upper part of the body slightly to favor drainage. The clamps are removed at the end of twenty-four hours. For their removal, only the external gauze is displaced; the other is permitted to remain for three or four days. It may be removed earlier if there is any indication of sepsis, as indicated by the elevation of temperature or frequent pulse. After the gauze is removed, the parts should be permitted to remain undisturbed for five or six hours, after which vaginal irrigation may be practised two or three times in the twenty-four hours, using simply sterilized hot water or a 5-per-cent. solution of sulphurous acid. Convalescence is usually rapid, patients are able to sit up at the end of ten days or two weeks, and in one instance the patient returned home before the end of two weeks.

The advantages of the use of the clamp over the ligature have seemed to be the greater rapidity with which the operation can be performed; second, the greater security against hæmorrhage; third, the more effective drainage, due to the pressure of the clamp upon the perineum and vagina; fourth, the absence of any foreign body to delay union as a result of infection. After careful study of the cases which have come under his observation, the writer fails to see wherein there are any contraindications to the use of the clamp that are not more than compensated by the advantages already cited. The

wisdom of any operative procedure must necessarily be judged by its results. In consideration of this operation, both immediate and remote results must be appreciated. No operative procedure would be considered a justifiable one which presents a large mortality with but little prospect of cure of the cases surviving its immediate effects.

The pages of medical literature afford such an abundance of information that it seems unnecessary to do more than to refer to the author's personal work. This includes twenty-seven cases with two deaths, a mortality of less than 8 per cent. Of the patients who died, the first was the third operated upon; died from tetanus on the fourteenth day. The second was the twenty-sixth in the order of operation, and developed a severe attack of catarrhal jaundice the day following the operation. There was nothing in the progress of the case that would cause one to suspect this condition as having arisen from sepsis, and there was a history of previous attacks. She died at the end of the week. When it comes to the consideration of the remote effects, it is rather difficult to base a conclusion of any value upon so few cases, especially when a majority of these were performed in the hospitals, and subsequently passed from observation. One has been in good health for five years; another over four; a third over three. Cases of relapse have usually occurred within six months.

Cancer of the Uterus; the Remote Results of Operative Interference.¹

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THE reason, no doubt, that we see from time to time some vaunted treatment for cancers, is largely due to the unsatisfactory results that have so far been obtained by any known remedy or course of treatment. At the tenth annual meeting of the Italian Surgical Society, held at Rome, this subject was fully discussed, especially with reference to the performance of hysterectomies. Professor Durante reported a number of cases of hysterectomies for cancer of the uterus, and says, "In most of these cases the disease returned and death occurred in from six to twenty-four months after the operation, and in only two cases four years have passed and the patients have remained perfectly well since." Professor Gasselli confirms the views expressed above as the result of his experience, and says, "In view of these results he did not feel justified in recommending the operation, and had only operated at the patient's express desire. The age of the patient is more important from the point of view of the prognosis of such an operation than the extent of the disease; the younger the patient the more rapid the relapse." Professor d'Antona admitted that his experience from operation for cancers was extremely gloomy; that he had performed five hysterectomies for

uterine cancers since the first of the year to October 27, and in three of these cases the disease recurred within five months, and in one of these the operation was performed so early in its evolution that a diagnosis was only arrived at by means of a microscopical examination.

A. Martin, of Berlin, in his work on "Diseases of Women," says, "In regard to adenomata, that the prognosis is not absolutely unfavorable during the earliest stages, while for the fully-developed forms it must be characterized as such." In its earliest stages he advises thorough curettage, then cauterizes the raw surface with liquor ferri, but in pronounced and fully-developed forms he always looks to total extirpation for radical treatment. He reports operations on six cases of pronounced adenoma, and thirteen times in the earlier stages where there was a considerable increase of the glandular apparatus of the corpus, leaving hardly any normal interglandular tissue remaining in the mucous membrane. Of these nineteen cases operated on, three died of the operation itself, one dying septic, and two in consequence of fatty degeneration of the heart, which was the result of the anæmia; two were attacked soon after by carcinoma in the scar; the others recovered, and remain permanently healthy.

¹ Read before the Georgia State Medical Association, April 19, 1894.

In carcinoma of the collum, out of

twenty-eight cases of Martin's, where he attempted total extirpation, where the disease extended beyond the uterus, eighteen of these in whom a small portion of the disseminated cancerous disease remained after the operation did not survive the latter, but died within the first two weeks. He qualified this by saying, "These results of mine are seen in their true character only when contrasted with the fact that of sixty-six *complete* extirpations (of diseased tissue) for carcinoma, only eleven were fatal."

Dr. Baker, of Boston, reported in the *American Journal of Obstetrics*, in 1888, fifty-seven cases of high amputation with the thermo-cautery; of this number he reports two deaths, and twenty-nine cases in which the disease has returned during a period of one to fourteen years, leaving the remaining twenty-six apparently cured.¹ Leopold, in his last series of eighty cases of vaginal hysterectomies, lost only four cases from the immediate result of the operation, and of these seventy-six recoveries, dating back from one year to five and one-half years, fourteen since succumbed, but only ten of this number died from a return of the cancer, leaving sixty-two still surviving, with only three recurrences of the disease.

In considering these cases we must bear in mind the tendency to become prejudiced and to be led astray by the unfavorable opinions of one operative procedure in contradistinction to other methods, both in regard to immediate results and respecting relapses. For, as is universally admitted by all operators respecting the special operation advocated by each, the better

the general condition of the patient and the earlier the stage of the disease when operated upon, the more we may hope to gain satisfactory results both immediate and remote.

Our statistics, as has been aptly claimed by Lawson Tait, often "shows more the mortality inherent to the operator than to any special mode of operation." But by taking together the results of all and classifying the stage of the disease when operative interference is resorted to, we feel assured in making the statement that the relief obtained by proper operative methods early in the course of the disease is equal to that of any treatment for similar conditions as found in the breast or any other portion of the body.

Taking the view, as is pretty generally accepted by good authority, that cancer in the beginning, as a disease, is purely local, while, if left alone, the result is always fatal, the profession at large should be more on the alert in recognizing this terrible disease at the earliest possible moment, so as to give the unfortunate patient the benefit of what the science of surgery can so far offer in the way of a cure, if possible, otherwise, in retarding the ravages of the disease and ameliorating the suffering incident thereto.

The records of my clinic for the last year show five cases as cancerous, being nearly one and one-half per cent. of the whole number applying for treatment. I wish also to include in this group three cases that I have seen in private practice in the last eighteen months, making seven in all. Only one of this number realized what her trouble was when I first saw her, and she was beyond the possibility of being relieved; another,

¹ Thomas and Mundé, *Diseases of Women*.

almost as far advanced, had been under treatment in this city for the past year for what she called the "change of life;" she had a continuous flow dating back four months at the time I was called to see her, which was in September, 1893; examination revealed cancer of the cervix (epithelioma) reaching up to the internal os, with induration involving base of bladder and broad ligament in right side. I could not promise her anything from an operation, the disease involved too much adjacent tissue; this opinion was sustained in consultation, and for four months she continued to suffer before the end came.

CASE III.—White, age 44, presented herself at my clinic in October, 1893; on examination I found cervix ulcerated on one side and covered with exuberant granulations, giving it very much of a strawberry appearance, also a bloody watery discharge from the vagina. I advised an operation at once, but she refused and passed from under my care, after consulting another physician who promised a cure by local applications. I did not see her again until two months ago, when she came back to ask my opinion as to whether she was improving. It was a sad task. The disease has steadily advanced, and she will soon succumb to its ravages.

CASE IV.—Colored, primipara, age 40; came to my clinic in February, 1893; condition as follows: Cervix hard to touch and hypertrophied, some excoriation, suffered pains of a sharp, lancinating character, watery vaginal discharge, often tinged with blood, also menorrhagia. She was operated on the following week. A high amputation of the cervix; she

made a prompt recovery, and has remained well since.

CASE V.—Negro, age 50, history imperfect; she dates her trouble back three months, when she began to have dribbling of the urine; examination revealed an ulcerated condition of the cervix and upper anterior portion of the vagina, of a yellowish-gray appearance. It had destroyed the whole anterior portion of the cervix and adjacent wall of the bladder, with nodular induration extending high up on each side. It was thought to be cancerous in its nature and beyond all hope of relief.

CASE VI.—Mrs. —, white, age 45, mother of four children; one miscarriage; last pregnancy fifteen years ago; mother died of cancer of the uterus; for the past three years she has suffered with menorrhagia, more or less constant pain, neuralgic in character; for the past year (preceding January, 1893) she had an offensive, watery discharge, often tinged with blood; general condition getting worse, becoming more and more anæmic. Examination revealed uterus large and heavy, painful to touch; passing the sound would cause an offensive bloody discharge and great pain. In consultation with Dr. Hardon it was thought best to curette, which was thoroughly done, removing the entire endometrium down to muscular structure, and then swabbing out the cavity with pure tincture of iodine. Her condition soon became better, temperature at the time of operation, 102 F.; a local treatment of iodine application and glycerin was kept up for several months; the immediate relief of pain and regaining her strength were very marked, and now she is apparently well, sixteen months

having elapsed. The section for microscopical examination in this case was not satisfactory, still I feel justified in reporting it as a possible adenoma, which, if it had not already taken on a malignant type, would soon have done so.

CASE VII was very much the same as case VI. I curetted and swabbed out the cavity with compound tincture of iodine two months ago; have since followed with local treatment as indicated in the preceding case. She has been relieved of the pain and flow, which had been continuous for three months preceding the operation, and is fast regaining her strength, the time being too short to report anything more than the immediate relief.

My object in reporting this series of cases, that have come under my care of late, is to impress two facts,—one, the common occurrence of this disease, especially in women nearing the menopause, and the other, the great disposition to overlook their true nature or probable tendency, and to incline to use palliative measures until the disease assumes a malignant form, whereby we lose our golden opportunity of effecting a cure in most cases.

The diagnosis early in cases of

cancer is not always easy and never has any degree of certainty without the use of the microscope. Yet in a great many cases there is a transition from the benign to the malignant form of ulcer, or inflammatory condition, such as we see in cases of slight glandular metritis, which, becoming more marked, becomes a typical, benign adenoma, and then by degenerating assumes the characteristics of malignant adenoma or so-called glandular epithelioma, which constitutes the first stage of cancer. So unsuspecting do we often see these gradations slipping from bad to worse that we should forever be on the alert, and try and remove in the most approved and scientific way every condition of diseased structure that might degenerate into the most horrible of all diseases,—a malignant cancer.

On account largely of our failure to always recognize the disease early in its incipency, we may expect a high mortality even with our operative interference; “but even loaded thus with a terrible death-rate, it may be urged that it is performed for a certainly fatal disease; a complete success is a life saved; a failure is an act of humanity in relieving pain and prolonging life for a short time or simply an accelerated dying.”

Hæmatocele Retrouterina.

BY GEORGE TUCKER HARRISON, M.A., M.D.,

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THE additions to our positive knowledge upon this subject have been, in recent years, of exceeding importance, largely due to the advances made by abdominal surgery, yet, notwithstanding, it must be con-

fessed that unanimity has not been attained in regard to its etiology, its pathogenesis, or its significance. A number of writers belonging to the modern school, ignoring the results of clinical investigation and pathological anatomy, have introduced into their description of this morbid condition such confusion as must tend to retard progress by propagating error. It is, therefore, of paramount importance, at the outset, to have a clear conception of what hæmatocele essentially is before proceeding to discuss it. When a knowledge of hæmatocele was brought to the notice of the medical profession by Nélaton, in 1850, he understood by the term a tense blood tumor situated in Douglas's cul-de-sac, which displaced the uterus forward against the symphysis pubis. The scope of the designation was subsequently extended and made to include all hæmorrhages into the pelvic peritoneum or free peritoneal cavity, whether proceeding from a ruptured uterus or ruptured tubal pregnancy, etc. The name hæmatocele or, more specifically in its typical form, *hæmatocele retrouterina* should be limited to an effusion of blood into Douglas's space, previously shut off from the general peritoneal cavity by pseudo-membranes, the result of a previous pelvio-peritonitis, forming a tense tumor which displaces the uterus forward. It should be carefully discriminated from a free effusion of blood into the peritoneal cavity, on the one hand, and an effusion of blood into the connective tissue of the pelvis, constituting an *hamatoma*, on the other. It constitutes thus a distinct morbid entity and is not a mere symptom, as some writers have erroneously maintained. The symptoms are usu-

ally well marked, and, on analysis, are found to consist of menstrual disorders, as a rule, of symptoms of acute anæmia, and of symptoms arising from the sudden development of a tumor in the pelvis, these latter being referable to the organs situated in the pelvis, or consisting of nervous and reflex phenomena. It is certainly remarkable that a disease so marked in its clinical features should not have been recognized until such a comparatively recent period, for its history only dates from the investigations of Nélaton, who may properly be called its discoverer. Voisin,¹ indeed, maintains that a knowledge of hæmatocele is as old as the time of Hippocrates, but the evidence on which he relies for his statement is utterly inadequate. So, too, the opinion of Bernutz,² that Ruysch,³ of Amsterdam, had a knowledge of hæmatocele, can no more be justified by an appeal to the historical facts than his own claims to priority of discovery. And while it is true that Récamier⁴ describes a tumor in the pelvis which contained blood, and while similar observations were made by Ollivier,⁵ Laugier,⁶ Bernutz,⁷ Bourdon,⁸ Velpeau,⁹ and others, it is also true that a full recognition of these facts does not invalidate the statement that Nélaton is rightly termed the discoverer of hæmatocele, as to him is due, indisputably, the credit of having first given an accurate clin-

¹ De l'Hématocèle rétroutérine et des Épanchements sanguins non-encystés de la cavité péritonéale du petit bassin, Paris, 1858.

² Clinical Memoirs, London, 1866.

³ Observ. Anatomico-Chirurg., cent. ois., LXXXV, 1691.

⁴ Lançette Française, 1831.

⁵ Archiv. gén. de Méd., Paris, 1831.

⁶ Dict. de Méd., Tome V.

⁷ Archiv. gén. de Méd., 1848.

⁸ Tumeurs fluctuantes du petit bassin, Rev. Méd.

⁹ Medical Observer.

ical description of the affection, and having first appreciated correctly its claims to be considered a distinct form of disease. He enunciated his views partly through the medium of his pupils (Vigués, Gaillet, and Bouchet), partly by his own lectures. Observing that the disease appeared in connection with menstruation, he termed it *hæmatocele retrouterina catamenialis*. His theory was that the blood originated from a Graafian follicle; owing to some abnormal condition of congestion, blood was poured out from that source, collected in the most dependent portion of the peritoneal cavity,—i.e., Douglas's cul-de-sac,—and, coagulating there, formed the retro-uterine tumor. While he regarded the seat of the disease as always intraperitoneal, Vigués, on the contrary, for a long time considered that it was always subperitoneal. Puech¹ observed that the exercise of coitus during menstruation might give rise to hæmatocele,—nay, that even very strong sexual excitement might be followed by the same result. Gaillard² advanced the theory that the hæmorrhage might originate from an ovum having an extra-uterine seat. If, for example, the Fallopian tube in which the ovum was seated should burst at an early period of pregnancy, the hæmorrhage would be limited in extent, and would not terminate fatally, but would only give origin to a hæmatocele. He considered that his theory derived support from the circumstance that menstruation had been absent several times previous to

the development of the hæmatocele or, at any rate, had been irregular.

Bernutz developed a theory, called by Aran *la théorie du reflux*. According to this author the lumen of the cervico-uterine canal may in fact be closed by an obstacle depending on the contractility of the uterus; the blood then accumulates in the cavity of the body, and, having dilated it, makes its way into the Fallopian tubes to pour itself thence into the peritoneal cavity. The theory which makes the hæmatocele dependent upon the existence of a *peritonitis hæmorrhagica* demands careful attention, from the prominence given it by Virchow in the pathogenesis. Though several French authors, as MM. Beau, Huguier, Tardieu, Dolbeau, spoke of a sanguineous exhalation from the serous membrane of the excavation of the pelvis, Virchow was the first who, on the basis of anatomico-pathological investigations, demonstrated the origin of hæmatocele from the rupture of new-formed blood-vessels in the pseudo-membranous products of partial peritoneal inflammation. In his incomparable work,¹ he thus speaks, "It is not rare that, when inflammatory processes take place in the excavation, and in consequence of them, a pathological condition of blood-vessels occurs, local hyperæmias and hæmorrhages originate, which are repeated from time to time, and gradually give rise to copious accumulations. In this latter case it may happen that the peritonitis retrouterina, like the pachymeningitis, generates pseudo-membranes, and that the extravasation which takes place out of the vessels of the pseudo-

¹ De l'Hématocèle périutérine et de ses Sources, Montpellier, 1838; De l'Hématocèle périutérine, Paris, 1861.

² Gazette Hebdomadaire, 1858. Archives de Médecine, 1860; Leçons cliniques sur les Maladies des Femmes, Paris, 1873.

¹ Die Krankhaften Geschwülste, p. 149.

membrane is deposited between the layers of the latter, and thus a closed (encysted) hæmatoma retro-uterinum (H. pelvicum s. periuterinum, Simpson) originates. We see the like at times in men in the *excavatio rectovesicalis*. The inflammatory genesis which Voisin demonstrated with exactness from a clinical stand-point is here not to be doubted, and the analogy with hæmatoma of the dura mater in only one point finds no application,—namely, in this, that the prognosis in general is not unfavorable, and the absorption occurs with astonishing rapidity. . . . Generally, indeed, the membrane regarded as the peritoneum is a new-formed membrane, which, like the pachymeningitic pseudo-membranes in the hæmatomata of the *dura mater*, is deposited on the old membrane, and beneath which the hæmorrhage takes place in such a manner that it is thereby encysted. That the extravasation is itself encysted secondarily by a pseudo-membrane consequent upon peritonitis, as Tyler Smith¹ believes, is less probable. . . . According to my view, the blood originates usually entirely, or for the greatest part, out of the new-formed vessels of layers produced by partial peritonitis in the excavations." Among medical writers and thinkers, in these modern times, no one has arisen with an intellect more keen, a learning more profound, or a skill and sagacity more unquestioned than Karl Schroeder. His contributions to this theme are of the greatest importance, enriched as they are by exact clinical observations and inductions derived from the searching analysis of all the facts bearing upon path-

ological anatomy scattered throughout the periodical literature. "Separation from the remainder of the abdominal cavity," he remarks,¹ "is necessarily involved in the idea of hæmatocele, since free blood effusions never form a tense tumor displacing the uterus forward; on the contrary, the free effused blood only forms a pool in the most dependent portion of the abdominal cavity, which is encapsulated by inflammatory new formations. The tense tumor displacing the uterus forward may originate in two ways. It is formed, in the first place, when, already before the hæmorrhage, a cavity existed shut off from the remainder of the abdominal cavity by pseudo-membranes,—i.e., a cavity with walls lying in apposition (in the same sense as we speak of a pleural cavity); so that while the posterior wall of the uterus and anterior rectal wall lie in juxtaposition, the Douglas space is bridged over above. If now a hæmorrhage ensues from a point situated beneath this roof, the blood is effused into the encysted space, distends its walls, and thus forms a tense tumor displacing the uterus forward. But, secondly, an hæmatocele may form also in such cases in which the Douglas space was not enclosed at the time of the hæmorrhage. In all these cases, however, let the hæmorrhage be whence it may, there is never the immediate formation of a tense tumor displacing the uterus forward, but there is formed, so long as the blood is fluid and not encysted, only a pool in the lower part of the abdominal cavity on which the intestinal coils float. This pool of blood changes its situation with the

¹ Transactions of the Obstetrical Society of London, Vol. III, p. 101.

¹ *Vide* Die Krankheiten der weiblichen Geschlechtsorgane, 11 Aufl., p. 541.

varying position of the patient, but always fills the region of the Douglas space, as this is the deepest part in standing or lying. The blood, however, so long as it is fluid and not encysted—and this is of especial importance—fills the Douglas space only in the same way as the coils of the intestine do,—that is to say, when the anterior rectal and posterior uterine walls separate one from another, as a result of the empty condition of the bladder and rectum, a considerable quantity of blood collects between these two organs; but as soon as the capacity of the Douglas space diminishes, as bladder and rectum become filled, the fluid blood recedes into the remaining portion of the abdominal cavity, in part or entirely. Quite the same thing happens to the examining finger, as a matter of course, so that the fluid blood no more feels like a tumor than free coils of intestine lying in Douglas's space. If, however, the blood coagulates, or if it becomes encysted, it forms, to be sure, a perceptible retro-uterine tumor, because it can no longer yield; but still the characteristic features of hæmatocele are not exhibited.

"The tumor will be quite large if, at the time of the coagulation, the bladder and rectum were quite empty, while if both organs were full only a thin layer of blood will separate rectum and uterus. From hæmatocele proper this blood tumor is discriminated by the circumstance that its walls are not tightly stretched; that it does not press the uterus forward, and that it only fills out the true pelvis so far as the organs of the latter permit. The chief symptoms of hæmatocele are therefore wanting, which consist in the pressure that the

tumor exercises on the organs of the true pelvis. When hæmorrhage has taken place into the free abdominal cavity, an actual hæmatocele is only produced if the hæmorrhage originates from a place deeply situated, and if it persists quite slowly or is repeated. A single hæmorrhage, occurring in the free abdominal cavity, for the reasons indicated, can never call forth the picture of hæmatocele; but if the effused blood, by its irritating influence on the peritoneum, has been encysted, and if the bleeding persists, or if it be repeated, the new hæmorrhage no more takes place in the free abdominal cavity, if it originates from a place situated beneath the roof, but in the closed Douglas space. The conditions are now consequently the same as in the primary closure of Douglas's cul-de-sac. The blood which is extravasated out of the vessels distends the new-formed roof, compresses the rectum, prolongs the floor of Douglas's pouch downward, and presses the uterus against the symphysis." I have quoted this author's views at such length because I regard them as in entire harmony with the truth and because they are in accord with my own careful clinical observations, with this limitation only, that, while the clinical phenomena at times observed lend countenance to his explanation given as to the mode of origin of hæmatocele in the second class of cases, yet that this genesis must be considered as true in a very small number of cases. Of late there has been a reaction from these attainments which is greatly to be deprecated. Thus, Lawson Tait, in his recent work on "Diseases of Women and Abdominal Surgery," calls a free escape of blood into the peritoneal

cavity from a ruptured tubal pregnancy *intra-peritoneal hæmatocele*. A hæmatoma he calls *extra-peritoneal hæmatocele*. His intra-peritoneal hæmatocele is no hæmatocele at all. In the recent work entitled "An American Text-Book of Gynæcology" the definition of pelvic hæmatocele is as follows: "By pelvic hæmatocele we mean an effusion of blood into the peritoneal cavity." Fritsch,¹ in his otherwise excellent work, is equally faulty in his definition. We are shut up to the doctrine just advocated by the following facts, which seem to us to allow no other alternative. *In the first place*, we never have a firm, elastic retro-uterine tumor displacing the uterus and perceptible from the vagina in those instances in which free effusions take place into the abdominal cavity, no matter whether these effusions are blood, dropsical accumulations, or exudations resulting from partial peritonitis. In cases of ovarian cystic tumor complicated by ascites, such a retro-uterine tumor is never observed, although here the intra-abdominal pressure must be greatly augmented. *Secondly*, the clinical phenomena appertaining to a case of hæmatocele clearly indicate the existence of a hæmorrhage in the true pelvis which finds obstacles to its expansion in the direction of the general peritoneal cavity. Hence the very decided pressure on neighboring parts, which causes a large portion of the symptoms. In the language of Klebs,² an eminent authority in matters belonging to pathology, "that this segregation of the space in which the blood effusion

takes place must have already existed previously, and have been determined by firm masses of tissue, seems to me to result as a simple and necessary consequence from the group of symptoms before noticed." Virchow, as we saw above, occupies the same ground. *Thirdly*, in at least three instances, I could diagnosticate positively the existence of adhesions between the uterus and rectum, the remains of previous partial peritonitis, in the subjects of which hæmatocele was subsequently developed. As a matter of fact it will be found, on careful analysis of the clinical history of each case of hæmatocele, that the rule is that at some former period of life there has been an attack of perimetritis. Moreover, it must be borne in mind that the doctrine that the effusion of blood is primary and the perimetritis is secondary, as Nélaton believed, is attended with difficulties, because it is now a well-ascertained fact that a free effusion of blood into the peritoneal cavity may be absorbed and leave not a trace behind.

With reference to the source of the hæmorrhage which leads to the formation of an hæmatocele: it may proceed from the tubes, the ovaries, the broad ligaments, and the remaining portion of the pelvic peritoneum, as has been demonstrated sufficiently. The two main sources of the hæmorrhage, compared with which all others sink into insignificance, are, however, rupture of tubal pregnancy and pelviperitonitis hæmorrhagica. Fritsch¹ certainly goes too far when he asserts that "it cannot at all be demonstrated with certainty that hæmatocele originates in any other way than by inter-

¹ Die Krankheiten der Frauen.

² Handbuch der pathologischen Anatomie, 4te Lief., S. 834.

¹ *Loc. cit.*, p. 446

ruption of pregnancy in the tube." Küstner¹ declares that he saw a typical hæmatocele develop on the forcible separation, after Schultze's method, of retrofixation cords. I have knowledge of a similar case which occurred in the practice of a colleague. Zweifel,² whose experience in this affection has been exceptionally rich, places the matter in its true light when he says, "Although it is not to be denied that cases of tubal abortion, two mentioned by Werth, one by J. Veit, four my own observations, make it highly probable that hæmatoceles may depend on tubal pregnancy more frequently than can be demonstrated in the evacuation of the blood-sac, yet it is going too far to drag everything, which in some measure corresponds to this interpretation, into a statistical inquiry in which the frequency of this causal connection is intended to be shown.

"We have, in interstitial inflammations of the tube, acquired a knowledge of morbid conditions which may very well produce blood-effusions and blood tumors of large size. Even in cases in which several signs were stated, *cessatio mensium*, for one or two months, livid coloring of the vestibule existing, I have performed laparotomies and found hæmatosalpinx but no extra-uterine pregnancy. . . . I admit, without limitation, that the demand that chorionic villi or the fœtus be found, cannot be met in general practice. But here the matter of all importance is to establish a scientific fact,—namely, the frequency of the origin of hæmatocele from extra-uterine pregnancy. That this proposition may rest on a scientific basis,

proofs must be brought forward; otherwise, instead of knowledge, we have conjecture." Pozzi,¹ as a source of the hæmorrhage in hæmatocele, dwells at some length on the *reflux par les trompes*, or regurgitation of blood through the tubes. This process, maintained by Voisin, and invoked by Bernutz and Goupil as a potent causal factor, and which the observations of Olshausen, Krieger, Barnes, and others, as they thought, tended to confirm, must, however, be regarded as very improbable. M. Puech pointed out that under conditions the most favorable for the theory of reflux, it was excessively rare, and Snow Beck, some time ago, drew attention to the fact that in the great number of hæmatometra so few are known in which the blood made its way through the Fallopian tubes into the pelvic cavity; although, in many cases, the internal pressure was so great that it caused rupture of the fundus, yet the blood had not escaped through the oviducts into the peritoneal cavity. This reasoning is not altogether correct, however correct the conclusion: some blood does escape under the conditions mentioned, through the *ostium abdominale*, but, as a rule, the effusion takes place slowly, so that, as a consequence of the irritation of the blood, encapsulating pseudo-membranes are formed, producing adhesion of the adjacent organs.

It may be laid down as a law that the plan of treatment in hæmatocele should be symptomatic and expectant, as the greater number of hæmatoceles attain to absorption almost completely. Nélaton at first resorted to active intervention, maintaining the general

¹ Grundzüge der Gynäkologie, p. 311.

² Vorlesungen über klinische Gynäkologie, p. 288.

¹ Traité de Gynécologie, deuxième édition, p. 841.

proposition that every hæmatocele should be surgically treated, but a number of fatal cases occurring in his practice made him abandon this method of treatment. Voisin's statistics, too, confirmed the dangers of surgical procedures, as he showed a percentage of 25 % deaths in consequence. As Pozzi expresses it, "the expectant plan was thereupon erected into a system." Of late years, however, since the advent of the antiseptic and aseptic era, and especially in consequence of the brilliant successes obtained by Zweifel, Gusserow, Martin, and others, there has been a marked tendency to a return to active intervention. The indication for surgical treatment will probably be extended rather than limited in the near future. When suppuration or decomposition takes place in the contents of the tumor, as a matter of course, there is no question as to indication,—elytrotomy is certainly demanded. But when no such complications have arisen, the question may well be asked, Under what circumstances are we justified in operating? The operation of elytrotomy is, I believe, indicated in all those cases in which the expectant treatment shows very little or no improvement, absorption making little headway or none at all. It is also indicated in cases in which the local annoyances are of such a severe type as to exhaust the strength of the patient. Again, regard must be had to the environment of the patient. A woman who has to earn her living cannot afford to wait for absorption under the expectant plan, and is only too glad to submit to an operation which will greatly shorten the duration of the disease. As Fehling¹ ob-

serves, however, we should always candidly state that the dangers attendant upon an operation are somewhat greater than are encountered in the expectant method of treatment. This proposition would not, however, be concurred in by many surgeons, as they would maintain that with proper precautions there is no increased danger in active intervention. I am not able to perceive the advantage accruing from laparotomy, as recommended and practised by Martin, Düvelius, and others, for the removal of the collection of blood, as the operation adds to the dangers and a necessary accompaniment is drainage through the bottom of Douglas's pouch.

In regard to the method of performing elytrotomy, we should proceed as in the case of perimetric exudations in which suppuration has occurred. A broad transverse incision is made at the deepest place of the posterior fornix vaginae, and then, by blunt dissection, the way is cleared to the sac. If there is a plain sac-wall, it is sutured above and below to the walls of the vagina. The blood coagula are now removed by the fingers without the use of force. Fehling¹ warns us not to attempt to penetrate too deeply, as protecting partition walls which shut off the effusion from the peritoneal cavity might be ruptured. If there is any bleeding, the use of iodoform gauze is indicated. If not, a rubber drainage-tube, with the addition of careful irrigation is in place. Gusserow² calls attention to the danger incident to the employment of the curette to remove the blood-clots. Scarcely closed vessels might be thus again opened.

¹ Lehrbuch der Frauenkrankheiten, S. 518.

¹ Loc. cit., S. 518.

² Archiv für Gynäkologie, Bd XXIX, p. 403.

Rupture of the Uterus; Palliative *versus* Surgical Treatment.¹

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It is improbable that any authority at the present time would advocate any specific treatment as applicable alike to all cases of rupture of the uterus. The object of this discussion which I have the honor to open, I therefore conceive to be, not to determine definitely the relative merits of strictly surgical as opposed to palliative measures in the treatment of all cases of this fortunately rare accident of childbirth, but rather to arrive at the methods most suitable for particular classes of cases, according to the condition and situation of the patient, the availability of surgical skill, the site and character of the rupture and manner of its production, the extent to which the child has escaped into the peritoneal cavity, the presence or absence of hæmorrhage, the condition of the uterus as regards sepsis.

In the beginning it should be clearly understood what is included under palliative measures, and what under surgical treatment. In the latter we should embrace not alone laparotomy, with or without suture of the rent or removal of the uterus, but also the various methods of drainage with gauze, wicking, or tube, with or without antecedent irrigation; while under palliative treatment we include the various general therapeutic measures for sustaining the patient's strength, relieving pain, and combat-

ing shock, combined with local antiseptics and natural drainage. It is obvious that in many cases palliative and surgical measures may be advantageously combined, and that palliation must yield to surgery when the conditions of the case warrant and demand it.

To one of limited experience in abdominal surgery, and in the severer cases of obstetric practice, who bases his conclusions largely on theoretic grounds, the idea of laparotomy after rupture of the uterus is an attractive one. What can be more satisfactory, on paper, from a strictly surgical point of view, than to open the abdomen, arrest hæmorrhage, suture the rent in the uterus, and cleanse the peritoneal cavity? And yet, extended experience can but convince that in many cases less radical surgical measures, or even purely palliative methods, give better results than laparotomy. The last case of ruptured uterus which I chance to have seen reported, by no less an authority than Dohrn,¹ of Königsberg, recovered under palliative measures. A multiparous uterus was ruptured in the course of podalic version. After the extraction of the child, but with the placenta unexpelled, the woman was sent quite a distance to a hospital. Here a large rent was discovered in the lower segment, in which lay the placenta and loops of intestine; after removal

¹ Abstract of introduction to a discussion by Am. Gyn. Society, Washington, 1894.

¹ Centralblatt für Gynäkologie, 1894, No. 11.

of the former, and after thorough antiseptic irrigation, the vagina was packed with iodoform gauze, and a firm abdominal bandage was applied. The previously moderate hæmorrhage now ceased entirely; there was no evidence of internal bleeding, and further interference was deemed unnecessary. The patient revived under stimulation, and was dismissed in good condition thirty-eight days after the rupture. Had this patient been subjected to the added shock of abdominal section, the result might have been less satisfactory; certainly it could not have been more so. In June, 1886, I had the misfortune to rupture a non-puerperal uterus in an attempt at forced dilatation for the removal of a fibroid tumor; the rent did not invade the cervix, but was higher up in the right latero-posterior wall, and of sufficient size to pass a medium-sized sponge in a sponge-holder. There was marked shock and moderate febrile reaction; but the patient entirely recovered in two weeks under purely palliative treatment. Six years ago I reported¹ to this society a case of rupture of the right lower segment of the puerperal uterus; the placenta escaped through the rent, and was removed with the hand from among the intestines. There was profound shock, but no hæmorrhage; the uterus contracted well, and there was no intestinal hernia. A localized peritonitis ensued; but under irrigation and palliative measures the woman not only recovered in about two weeks, but two years later bore another child. Surely laparotomy could have given no better results in this case.

It is obvious, however, that the merits of particular methods of treatment should not be determined by the few and possibly fortuitous results of individual observers, but rather by the collective experience of many. Medical literature is rich in contributions to this subject of the present discussion; but I will content myself with briefly reviewing the most recent collaborative work which has met my notice. Merz, of Basel, at the instigation of Professor Fehling, has published¹ an elaborate paper, with the especial object of comparing the results of laparotomy and suture of the uterine rent with other methods of treatment. From all sources accessible to him, Merz has collected 230 cases, published since 1870; many of these cases, therefore, come from the præ-antiseptic era. Of the whole number, 181 are complete ruptures, 46 incomplete, and 3 doubtful: the ratio of the incomplete ruptures to the complete is surprisingly large. After tabulating his cases *in extenso*, Merz groups them, according to the treatment, under ten heads; these tables are of sufficient interest to warrant their reproduction in this discussion for the benefit of those who chanced not to read Merz's original paper. In the first group are placed those cases which received no direct treatment of the rupture, but presumable only palliative measures and natural drainage, and are designated by Merz as *without treatment*.

The next group embraces five cases, several of which were treated with cold compresses and irrigation, in addition to treatment with simple compression-binder.

¹ Transactions of the American Gynæcological Society, Vol. XIII, p. 209.

¹ Archiv für Gynäkologie, 1893, Band XLV, Heft 2.

Twenty-five cases were treated with tamponnade of the rent with iodoform gauze; eleven of these received hot antiseptic irrigation of the uterine cavity.

Under the next group are included those cases treated by drainage, either with iodoform wicking or a suitable tube of glass or rubber. It is immaterial, however, whether wicking or gauze is used, provided the latter is loosely applied. Those cases treated by drainage, in which the material used is not distinctly stated, are grouped separately. Some of the cases were treated with antecedent irrigation (of the peritoneal cavity in complete ruptures), and are designated with the letter "c;" those treated without irrigation are designated with the letter "s." Treatment with drainage. Complete rupture.

Of these twenty-seven cases treated "c" drainage, eighteen, or 66.6 per cent., recovered. Incomplete rupture.

Of these seven cases treated "s" drainage, six, or 83.3 per cent., recovered.

Passing to the tabulation of the cases treated by laparotomy, Merz remarks that concerning the admissibility and advantage of this operation the views of operators are not only generally but also in each single case very diverse; and that, while in general there is substantial agreement that abdominal section should be performed when the foetus has entirely escaped into the peritoneal cavity, there is no unanimity on the question as to whether, after the delivery of the child by the natural passage, one should do laparotomy and suture the uterine rent, or resort to one of the other methods of treatment. Merz

quotes Fehling as unreservedly in favor of laparotomy and suture,—“It is surgically wrong,” says Fehling, “to leave a large, lacerated wound to the danger of hæmorrhage and sepsis, instead of searching for it and giving careful attention to hæmostasis.” Piskacek, on the contrary, when the woman has been delivered by nature or art, believes chiefly in drainage with iodoform wicking, and resorts to abdominal section only when there is positive certainty of a fatal issue without laparotomy.

Merz finally groups his cases into the following summary:

(1) If the foetal body and extremities have escaped into the peritoneal cavity, the head remaining in or over the pelvic inlet, delivery should be effected *per vias naturales* by forceps or cranioclast.

(2) If the head, or indeed the entire foetus, has passed into the peritoneum, version ought not to be performed, on account of the danger of enlarging the uterine rent; but laparotomy should be done, and the foetus removed through the abdominal wall.

(3) In the latter case, the uterine rent should be carefully sutured.

(4) If the woman has been delivered *per vias naturales*, under reasonably favorable circumstances, laparotomy with suture of the rent should immediately follow.

(5) If the circumstances are such that laparotomy is deemed inexpedient, drainage with iodoform wicking should be employed without preceding irrigation.

(6) If the uterine rent be very ragged, or if septic endometritis has already begun *sub partu*, the uterus should be removed after Porro.

I cannot agree altogether with these

conclusions of Merz, nor do I think them warranted by his statistics. It is desirable also that the indications for the various methods of treatment should be more specifically defined. The prophylactic treatment of uterine rupture is clearly beyond the scope of this discussion. In regard to the obstetric treatment after rupture has occurred, it is generally agreed that when the foetal head is accessible, it should be delivered by forceps or cranioclast. If the head alone has escaped from the uterus and the feet are accessible, delivery by podalic version can usually be effected without enlarging the rent, if the cervix is not rigid and the pelvic contraction not extreme. If, however, so large a portion of the foetus has escaped from the uterus that its withdrawal is likely to enlarge the rent; and if, moreover, the size of the pelvis and the state of the soft parts are such as to contraindicate delivery by the natural passages, abdominal section is clearly indicated to deliver the child, after which hæmorrhage may be arrested, the peritoneum cleansed, and, according to the character of the rent, the uterus can be sutured or not, or removed after Porro. Lusk¹ tersely says, however, "The not uncommon impression that the ruptured uterus furnishes a promising field for abdominal surgery does not take into account that in many of the cases where laparotomy is clearly indicated, the patient is practically moribund. The employment of the suture to close the uterine wound, in view of recent Cæsarean successes, sounds reasonable; but it must be remembered that with ragged borders infil-

trated with blood, with the stripping of the peritoneum, and with air or gases sometimes infiltrated into the subperitoneal connective tissues, the conditions for union are in nowise comparable to those which exist when a clean incision is made into a perfectly normal muscular organ. . . . The supravaginal amputation of the uterus, with suture of the peritoneum below the ligature, promises fairer results, though the deep situation of the tear makes it difficult to secure a healthy pedicle." It will be remembered that Merz's statistics give a recovery of 41.7 per cent. after suture, and 53.3 per cent. without suture and after Porro.

Treatment of Uterine Rupture after Delivery of the Child by the Natural Passages.—In considering this part of our subject let us remember that, as has been clearly shown by Bandl, the very great majority of uterine ruptures, whether spontaneous or traumatic, begin in the thinned lower segment, and are generally limited there, although they occasionally extend through the contraction ring and may involve the entire length of the uterus. These tears are most commonly longitudinal and lateral, the circular and transverse rents occurring for the most part in juxto-minor pelves. The tears through the body of the uterus are generally complete, while rents in the lower segment are in about one-fourth¹ of the cases incomplete.

From what causes does a woman die after rupture of the uterus? Primarily, from shock and hæmorrhage; secondarily, from intestinal hernia, peritonitis, septic infection, or

¹ The Science and Art of Midwifery, p. 618.

¹ Merz, loc. cit.

exhaustion. Many cases will speedily succumb to the primary causes when the hæmorrhage is profuse and the shock profound, and surgical skill, even when promptly available, is unavailing. But when there is time for any treatment, the first object, of course, is to arrest hæmorrhage or keep it in check until surgical skill can be obtained. Uterine massage compression, and the application of ice are of value in securing prompt uterine contraction. The abdominal aorta can be effectively compressed, even by a layman, through the abdominal wall, and when the bleeding occurs from a rent in the lower segment, it can often be arrested by tampon-pressure from below combined with firm manual compression of the uterus from above. One accustomed to pelvic surgery can, I believe, often succeed in securing vessels in the lower segment by drawing down the uterus with vulsella forceps and applying sutures directly to the bleeding parts, as is successfully done in deep lacerations of the cervix. But if all these expedients are unavailing, and the patient is not already moribund, the obvious duty is to open the abdomen to arrest the hæmorrhage, as after a ruptured tubal pregnancy.

But serious hæmorrhage is by no means always present after uterine rupture, or it has been arrested by some of the above-mentioned methods other than by laparotomy. What is the next duty of the attendant? If the rent has been tamponned, it is well to allow the gauze to remain for perhaps forty-eight hours, after which time it should be removed for scrupulous antiseptic irrigation. When no tampon has been required to control hæmorrhage, the propriety of provid-

ing irrigation of the lower peritoneal cavity in complete ruptures comes in question. Merz evidently decides against this procedure; but I fail to see that his statistics support him in his opinion. To be sure, if a case has been aseptically conducted, and if the foetus has not largely escaped through the rent, primary irrigation of the peritoneum may scarcely seem necessary, since the liquor amnii has almost invariably escaped long before the rupture, and nothing would therefore have passed through the rent except blood-clot, of which, if aseptic, the peritoneum is very tolerant. But while it may be injudicious or unnecessary to irrigate the peritoneum with strong antiseptic fluids, I believe it to be wise to flush the cavity with sterilized water, or with, what is better, a hot, sterilized, physiological, salt solution, which not only cleanses but increases the blood volume by absorption.

If the rent is incomplete, or if the complete tear has closed with the contractions of the uterus, in the absence of hæmorrhage, only palliative measures are necessary,—namely, natural vaginal drainage, asepsis, and general supportive treatment; but in complete and gaping rents, gauze or wicking drainage is clearly indicated, gauze serving not only as a drain but as a preventive of intestinal hernia. Peritonitis should be dealt with on general principles, salines and the electric coil being of especial value. It will be remembered that under surgical drainage Merz showed a recovery of 66.6 per cent. out of twenty-seven complete ruptures, and of six out of seven cases of incomplete ruptures.

In conclusion, it would seem that, for purposes of treatment, we may

divide cases of uterine rupture into three classes :

(1) Complete or incomplete tears of the lateral or posterior walls of the lower segment, with adequate provision for vaginal drainage, with hæmorrhage absent or easily controlled, and with no intestinal hernia. Such cases will often do well under simple palliation, with natural vaginal drainage, local antisepsis, general supportive treatment, and measures to promote and maintain firm contraction of the uterus.

(2) Complete tears of the lower segment or even moderate tears of the uterine body, with hæmorrhage controllable *per vaginam*, with gauze pressure or partial suture, where the child has partially passed through the rent, and where more or less blood-clot and liquor amnii and perhaps also the placenta have entered the peritoneal cavity. For this class of

cases peritoneal irrigation and weak antiseptics or sterilized salt solution, drainage, and iodoform wicking or gauze, combined with general palliative measures, would seem most appropriate.

(3) Cases in which delivery of the child through the pelvis is impossible or inexpedient; in which there is present hæmorrhage uncontrollable *per vaginam*; in which the rents in the uterus are extensive and of irregular, transverse, or ragged character. For such cases abdominal section is indicated.

The propriety of suturing the rents must be decided according to the condition of the uterus and the edges of the tears. When the latter are very ragged and infiltrated with blood, when the uterus is friable and apparently septic, hysterectomy promises better results than suture.

Inflammation of the Ureters in the Female.¹

BY MATTHEW D. MANN, A.M., M.D.,

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THE author writes to call attention to a disease which is frequently overlooked, although it is very common, yet it is often mistaken for other diseases. He has seen many cases since Dr. Kelly called attention to it in 1888. As yet the text-books are almost silent on the subject.

There are three points where the

calibre of the ureter is diminished, the first one and a half to two and a half inches from the pelvis of the kidney; the second at the junction of the pelvic and vesical portions; the third where the ureter curves over the iliac artery.

The ureters can be recognized by palpation, especially when enlarged by disease, as two cords running from a point a little in front of the uterus and a little to one side of the median

¹ Abstract of paper read before the American Gynecological Society, Washington, 1894.

line, directed at first towards the sides of the pelvis and then curving somewhat sharply backward until they go beyond our reach near the spine of the ischium; in front of the uterus their ends are separated by an inch or more of space. The commonest disease of the ureters is inflammation, of which the author has learned to recognize seven causes.

(1) Injuries during childbirth.

(2) Previous disease of the bladder.

(3) Gonorrhœa.

(4) Suppuration of the pelvis of the kidney.

(5) Pelvic disease; such as pelvic peritonitis, cellulitis, and tumors.

(6) Abnormal conditions of the urine.

(7) Tuberculosis.

(1) *Injuries during Childbirth.*—The symptoms are chill, high fever, pelvic pain, and vesical irritation coming on several days after labor, usually in primiparæ; examination shows nothing wrong with uterus, tubes, or pelvic peritoneum, but pressure over the lower end of one of the ureters shows great tenderness. After the third or fourth day examination of the urine shows acid reaction with large amount of pus and some blood, no mucus or evidence of bladder trouble; there is some tenderness over the kidney on the affected side. The author's cases recovered, but fatal cases have been reported. The cause is probable injury of or pressure on the ureter by the child's head or by forceps, especially when the latter are used with the pendulum movement, and if the head pushes down an undilated cervix and the bladder with it.

Sometimes the symptoms are less severe, but there is vesical irritability lasting a long time. The urine is

acid. The author's cases did well under large doses of alkalies and alkaline mineral water.

(2) *Previous Bladder Disease.*—In this class are to be reckoned certain deformities, such as fissure of the bladder, where the ureters are generally dilated; in cystitis, except in the gonorrhœal form, extension to the ureters either does not occur or is a late symptom. If a neoplasm or hypertrophy of the bladder obstruct the exit of the urine from the ureters, dilatation of the ducts gradually takes place with subsequent infection and serious trouble. Acute septic cystitis may sometimes be conveyed to the ureters.

(3) *Gonorrhœa.*—The author has seen cases where gonorrhœa has infected first the bladder and then the ureters; he suggests that many of the failures to obtain entire relief from pain after cœliotomy for pustules are due to coincident but unrecognized gonorrhœal ureteritis.

(4) *Pyelitis and Pyelonephritis.*—Suppuration of the pelvis of the kidney, and of the kidney itself, is more often due to previous disease of the ureters than *vice versa*. Still, many cases are recorded where the disease is due to calculus or tuberculosis, perhaps, sometimes, to embolus of the kidney. The suppuration in the pelvis of the kidney leads to that of the ureters, the so-called descending ureteritis.

(5) *Pelvic and Uterine Disease.*—The author disagrees in many points with the conclusions of Engelmann. He disbelieves in the extension of inflammation except along surfaces, and does not admit that ureteritis ever follows inflammation in the tubes, ovaries, pelvic peritoneum, or parametrium, by direct extension. If the

two coexist he would look for a common cause, such as gonorrhœa, or would admit the causation of pelvic exudation, causing pressure and obstruction.

He would also admit that, as the digestive processes are often disturbed by primary disturbances of the pelvic viscera, the resulting indigestion will cause abnormal conditions of the urine, and thus lead to ureteritis. Renal insufficiency may often be a result of the inhibitory influence of the nerve-centres due to peripheral irritations of the sexual organs, and thus may cause ureteritis.

(6) *Abnormal Conditions of the Urine.*—The author believes that abnormal states of the urine cause the great majority of cases of ureteritis. The urine which is at the bottom of the trouble is excessively acid, often depositing a thick sediment on standing. It is scanty and high-colored; or this condition may alternate with a profusion of pale, limped urine of very low specific gravity. The constant passage of this abnormal urine irritates the whole urinary tract, and is the most common cause of inflammation of the ureters. This condition is often known as lithæmia. Renal insufficiency is common with scanty urine of low specific gravity, and reduced amount of solids excreted; urine acid, containing a variety of crystals.

(7) *Tuberculosis* is not uncommon, but seldom, if ever, exists without the presence of the same disease in the kidney.

Pathological Anatomy.—The catarrhal form occurs with slight swelling of the tubes, and desquamation of the epithelial lining; here the force of the disease seems to be spent on the lower

end of the ureter, especially the part in front of the broad ligament. In other cases the surface of the tubes seems to give forth a plentiful purulent secretion, which indicates an ulcerated or granulating condition of their lining membranes. Sometimes the tube is greatly thickened, even as large as a lead-pencil or larger. These cases may end in involvement of the pelvis of the kidney. In several cases perinephritic abscesses have developed, as proved by operation. Usually both ureters are involved in the pathological process, but often only one side, commonly the left, is much more seriously affected than the other.

Coincident Affections of Other Organs.—There is seldom a general cystitis, but there may be a patch of granulations around the mouth of the affected ureter. It may be that vesical tenesmus is always due to localized congestion, granulation, or ulceration around the mouth of one or both ureters on the bladder wall. The walls of the bladder may become contracted. Other complications are the various forms of tubal, ovarian, and uterine disease. Endometritis is the commonest.

The causes which produce ureteritis will also in time produce changes in the kidney, especially contracted or granular kidney. Abscesses may form in or around the kidney or around the ureter. Bright's disease may come to end the scene.

Symptoms.—The most constant is frequent micturition, which may even become continuous.

In the worst cases the patient can hardly leave the commode, day or night.

The next symptom of importance is pain over the ureters, one or both,

the left side being most frequently affected. This pain is described as burning or boring, and is nearly constant, but is always greatly aggravated as the menses approach, even becoming agonizing during the flow. This peculiarity has often led to an error of diagnosis, the disease of the ureters being mistaken for ovarian disease. Where there is renal insufficiency there is frequently an absolute distaste for water. In some cases water seems actually to produce nausea, and the distaste for it is very hard to overcome.

There may also be present symptoms of cystitis, or of disease of the kidney. In lithamic patients there may be bilious attacks and sick headaches, gastric and intestinal dyspepsias are common, and there is often a history of inherited rheumatism or gout. Great depression of spirits is not an uncommon symptom.

Sometimes the disease is intermittent, but usually it is chronic, lasting for years. The pain is sometimes steady; again it is spasmodic. It may be stationary over the ovarian region or it may be felt over the hip and down through the iliac fossa. In some cases the pain is intensified by walking; others are unable to ride in any vehicle, the jar-movement causing much pain.

Attacks of gravel or the passage of small stones from the pelvis of the kidney are rather common, and may be distinguished by the usual symptoms. In some cases the passage of plugs of inspissated pus produces symptoms similar to those of gravel.

Diagnosis.—This disease may be recognized (1) by the symptoms above enumerated; (2) by the physical examination; and (3) by examination of

the urine. It is on the physical examination that we must place the chief reliance. When the ureter is enlarged it is easily palpated. When it is not enlarged it is not so easy, and it is not possible to perfectly and clearly distinguish the ureters in all women.

If, however, we know their anatomical position and pressure over these points—and these points alone—elicits pain, we may, if the symptoms are corroboratory, safely infer that we are pressing upon the ureters and that they are diseased. Care must be taken not to confound tender spots in the other structures of the pelvis, so frequently discoverable, for the ureters.

Method of Pelvic Palpation.—The finger is carried along the anterior vaginal wall, upward and outward, near the brim of the pelvis to one side of the uterus. It is then passed forward stroking the pelvic wall and carefully feeling for a cord-like body under it. Sometimes a bimanual examination will greatly aid in discovering the ureters. Anybody who has once distinguished an enlarged ureter will be astonished at the ease with which it can be done.

Tenderness on pressure is usually present, often to an extreme degree, with a feeling of desire to urinate on touching the ureters. In some women it is said by Tournour to be possible to palpate the enlarged and thickened ureters through the abdominal wall. It is to be found at the superior strait at one-third of the distance which separates the anterior superior spines of the iliac.

Examination of the Urine.—The amount, chemical condition, and microscopical appearances must all be

determined in order to make a diagnosis. It is often scanty, even as low as six ounces in twenty-four hours; always acid, often hyperacid, unless cystitis coexist, and often of low specific gravity, 1010-15. The sediment will consist of urates, uric acid, calcic oxalate, often pus, and a little epithelium. All attempts to locate the seat of the disease by the presence of peculiar types of epithelium will fail. In old cases where pus is present in large amounts no epithelium is found. Blood-cells in greater or less proportion will often be found with the pus.

The amount of mucus in the urine will be very slightly increased. There are no mucous follicles in the pelvis of the kidney or in the ureters. As the bladder is abundantly supplied with such follicles, the presence or absence of mucus is of much diagnostic value. Urine containing pus without mucus and acid in reaction is a sure indication of inflammation of the urinary tract above the bladder, leaving out, of course, the presence of an abscess opening into the bladder.

On the other hand, alkaline (ammoniacal) urine is a sure sign of cystitis, but does not exclude involvement of the ureters or pelvis of the kidney. Generally there is no albumen or only a trace of it in the urine of purulent urethritis.

The presence of albumen with pus may mean, then, either that the kidneys are affected or that the pus comes from an abscess cavity, the *liquor puris* furnishing the albumen.

Prognosis.—If the trouble has not lasted very long and the ureters are not much thickened or enlarged the prognosis is good, although the time necessary for a cure will be consid-

erable. In old chronic cases, where great thickening of the ureters has taken place and where large amounts of pus are found in the urine, the outlook for the patient is certainly not good. It is altogether likely that abscesses will form in or around the kidney and that the patient will succumb from them, or later from some form of Bright's disease.

One case is reported of recovery after formation of renal abscess which was opened and drained, leaving a sinus; the kidney was finally removed and the patient recovered.

Treatment.—(1) Constitutional.

(2) Local: (a) through the urine; (b) direct local treatment.

(3) Surgical.

(1) *Constitutional.*—This is of the utmost importance, and involves securing the best possible environment, out-door air, etc. The diet should be so regulated as to keep the urine bland and unirritating. Sugars and starches are often poorly digested and are to be avoided. Alcoholics, especially wine and beer, must be given up.

Where the kidneys are not acting freely, the hot-air bath is useful to make the skin act for the kidneys and to lessen the congestion of the internal organs. Under this treatment the kidneys will quickly resume their work. Massage is of great use and may be employed immediately after the hot-air bath. Water is to be drunk freely. Alkalies are of great importance, and they should be used long and persistently in sufficient quantity to keep the urine alkaline or at least neutral. The author uses liquor potassium in doses of five drops or more, also acetate and citrate of potassium, and Rochelle salts and

bicarbonate of soda. Lithium salts are often of great value.

The bowels should be kept acting freely; agents which act on the liver, like podophyllum, leptandrin, eucalyptin, are useful.

Where there is a history of constipation, flushing of the colon is of inestimable value. If anæmia exists, the use of iron and arsenic will be beneficial.

Exclusive milk diet may entirely cure the patient when other means fail.

(2) *Local: (a) Through the Urine.*—Copaiba and especially oil of sandalwood are useful when there is a great deal of pus in the urine. Salol, hydronaphthol, and turpentine may be tried, but are not so clearly useful; benzoic acid is useful where there is cystitis.

(b) *Direct Local Treatment.*—By Kelly's methods and instruments the ureters can be reached directly and treated by solutions of boric acid, nitrate of silver, etc. The results of this new treatment are not yet established.

(3) *Surgical Treatment.*—Not much has yet been done for the surgical treatment of diseased ureters. Sometimes the continuous *ardor urinæ* is relieved by establishing a vesico-vaginal fistula.

If the bladder is contracted and irritable, it should be distended with weak solutions of salt, boric acid, etc. If there be granulations around the ureteric openings, congested areas, or ulcerations, they can be treated topically by the aid of Kelly's speculum. The author has recently had a brilliant success in the local treatment of such a case.

From what has been said it will be seen that much more research is necessary before we can arrive at a truly satisfactory treatment of this affection. If, however, the author succeeds in arousing the attention of the profession to its existence, and to the necessity of recognizing and treating it, he thinks the beginning of the end will have been reached.

ABSTRACTS FROM CURRENT LITERATURE.

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SECTION OF OBSTETRICS AND GYNECOLOGY.

"REPORT ON Symphyseotomy." By Professor Morisani.

The conclusions reached in this long and instructive paper are the following:

(1) Symphyseotomy is a perfectly justifiable operation, both theoretically and clinically. Thanks to it, a well-developed fœtus at term can pass through a narrow pelvis, between the limits of sixty-seven to eighty-eight millimetres.

(2) Symphyseotomy is a bad operation to perform when the fœtus is dead or its vitality compromised.

(3) In general, this operation should be performed when the fœtus is at term, when labor has commenced and dilatation is advanced. The combination of symphyseotomy with *accouchement prématuré* should not be accepted in the practice of to-day. In certain cases, when the fœtus is dead, symphyseotomy, combined with embryotomy, may be resorted to.

(4) *The modus operandi* consists in cutting through the cartilage of the pubis with either the curved knife of Galbiati or with a strong button-pointed bistoury. The articulation may be opened from below upward, or from above downward, providing that the subpubic ligament is divided.

(5) The operator should see that both iliac bones spread after the operation.

(6) In a pelvis measuring eighty-one millimetres or more, it is well, before dividing the articulation, to make a prudent trial at extraction with forceps, without, however, going too far, in the interest of the fœtus.

(7) The use of the forceps after symphyseotomy is an aid in a great many cases, but is not indispensable.

(8) The suture of the bones and apparatus for immobilization are not necessary. It is sufficient to suture the soft parts and apply a good bandage. It is a great mistake to place any foreign body in the lips of the wound.

(9) Symphyseotomy can only be compared with embryotomy when the child is living, and merits in every respect the preference. It is destined to take the place of Cæsarean operation.

(10) The question, as to whether *accouchement prématuré* should be practised in the first week of the ninth month or to wait until the end of pregnancy, and do symphyseotomy in the necessary cases, is to be seriously considered.

(11) Ischio-pubiotomy is entirely different from pubiotomy as practised by Aitken and Galbiati; it should bear its inventor's name and should be called *Farabeuf's operation*. It is a precious resource in cases of narrow pelvis, produced by ankylosis of one of the sacro-iliac symphyses (the oval oblique pelvis of Naegelé).

(12) The pretended disastrous results of symphyseotomy have only been observed when the operation was not performed within the limits of its indication, the causes being: (a) the time of labor when it was performed; (b) the way of operating; (c) the lesions already inflicted on the genital tract; (d) the special conditions of the patients. The death of the fœtus is to be attributed to: (a) a too late intervention; (b) accidental circumstances; (c) to accessory means serving to extract the child.

"Symphyseotomy and Enlargement of the Pelvis." By Professor Pinard.

The author of this paper chiefly analyzed his own cases, numbering in all thirty-six symphyseotomies, pubiotomy, and ischio-pubiotomy, with thirty-one cures and two deaths for the mothers and thirty-four living and four dead children. The two fatal cases in the mothers were produced in one by a septicæmia (staphylococcus) on the seventh day, the other by an intestinal obstruction. The death of the children resulted from an insufficient section of the symphysis, a too premature labor, poor application

of the forceps or trial with the forceps preceding the symphyseotomy. Accidents due to the operation were *nil*. Five primiparæ had a tear of the vagina, which however united by first intention, either by simple packing or by suture. The sequelæ of the operation were also favorable; sufficient union of the pelvis took place within twenty days; in one case pregnancy recurred without disturbing the section of the pubis; the children developed normally. The relative value of the increase in size of the pelvis, in relation to statistics of provoked labor, can be seen by the following table:

Symphyseotomies: years 1892 and 1893: thirty-eight cases, of which thirty-six mothers survived and two died; of the children, thirty-four lived.

Induced labor: years 1892 and 1893: sixty-four cases, of which sixty-two mothers survived; of the children, thirty lived and thirty-four died. Professor Pinard, in concluding, said that as a total seventy lived, and six died in symphyseotomy, and ninety-two lived and thirty-six died in induced labor. The technique of the operation to be followed as given by Pinard being: place the left index on the left side of the clitoris, so as to find the summit of the arcade with the bistoury; cut down to the finger-nail, thus making a section through the white tissues in front of the symphysis; cut the suspensor ligament of the clitoris transversely, and the knife is then seen and the finger placed on the posterior aspect of the symphysis serves as a guide in continuing the incision behind. At present, aseptic symphyseotomy offers little danger, and should allow a widening of the pubis in relation to the narrowness of the pelvis. This widening is danger-

ous if carried beyond seven centimetres. If no widening can be obtained, symphyseotomy should be put aside and Cæsarean section performed, followed by amputation of the uterus and adnexa. If one has to do with an oval oblique pelvis with sacro-iliac synostosis, ischio-pubiotomy should be performed; coccygotomy when there is ankylosis of the coccyx. In conclusion, Professor Pinard condemns embryotomy when the child is living, and says that it should be replaced by symphyseotomy, induced labor, and operations destined to favor the struggle of the fœtal head with a pelvis rebellious to uterine contractions.

"On the Dimensions of the Fœtal Head in the Biological and Anthropological Point of View." By F. La Torre.

Up to the present time the development of the fœtus has only been studied on the maternal side, and the paternal side has been forgotten or neglected. This is not rational. The product of conception is the result of union and fusion of both male and female elements. The influence of the father is more marked in the physical development; that of the mother on the moral and intellectual faculties. The father exercises his influence in health and disease as well. The writer has shown that when the father is, at the time of fecundation, well and strong, it favors the development of the fœtus, no matter what may be the condition of the mother. The average weight is 3500 grammes in these conditions; on the contrary, when the father is sick, the product of conception is arrested in its evolution and the mean weight is 2600 grammes. There is, conse-

quently, a mean difference of 900 grammes. On the other hand, we know that the dimensions of the head are in relation to the weight of the body; heavy weight, large head; light body, small head. For example, for a fœtus of 3500 grammes the biparietal diameter is nine centimetres and five millimetres and the bitemporal is eight centimetres, while for a fœtus of 2600 grammes, the biparietal diameter is 8.5 centimetres and the bitemporal seven. Now, taking the means of the cranial dimensions of fœtus weighing between 3000 and 5000 grammes, as has been done up to the present time, a large number of fœtus weighing under 3000 grammes and produced by diseased fathers have not been counted in. The means of the dimensions of the fœtal head as is given to-day are biologically inexact; this is also true in the anthropological point of view. In reality it has been demonstrated that there are men with large and small heads; it has also been shown that, of all the parts of the body, the head is what is unchangeably transmitted, in such a manner that a large-headed father cannot, except in a state of disease, procreate children with small heads, and *vice versa*. Now, by taking the means of cranial dimensions of fœtus with large heads, and consequently over 3000 grammes in weight, we neglect small heads belonging to fœtus procreated by small-headed fathers. The means actually given are not exact. It is consequently necessary, in order to be logical, to consider the development of a fœtus biologically and anthropologically by two means; one taken from the heads of fœtus weighing from 3000 to 5000 grammes, the other

from fœtus varying from 2500 to 3000 grammes.

"Indications for Vagino-Fixation of the Uterus." By Pestalloza.

This operation has been advised with a certain enthusiasm, and the speaker was one who had counselled it, but at present he was not so absolute in his opinion. The after-results of this operation are not always perfect, and in the majority of the cases retroversion reappeared some time after vagino-fixation. He considers, according to his personal practice, that this operation should be limited to cases where uteri in retroflexion are reducible but not to hold in place the pessary. It is then that one should operate. In cases with adhesions, he prefers abdominal hysteropexy and shortening of the round ligaments by vaginal fixation. Dr. Pestalloza considers that the last-mentioned operation has a value equivalent to the pessary. One should come back to a more moderate opinion and limit the indications for this operation.

"Electrotherapy in Gynæcology." By G. Apostoli.

The speaker insisted on the usefulness of this method of therapeutics. It procures ameliorations that are often equal to cures. It permits of determining a doubtful diagnosis, and, lastly, it offers this fact of interest, that it does not prevent pregnancy in its after-effects. Intra-uterine electrotherapy (faradic, galvanic, or sinusoidal), as taught by Dr. Apostoli, wisely, rationally and patiently applied, merits to remain at the head of gynæcological conservative therapeutics, because: (1) It more often assures an amelioration of the symptoms which is sometimes as good as a cure; (2) supreme in endometritis and the

principal functional troubles (amenorrhœa, dysmenorrhœa, metrorrhagia); (*b*) very efficacious in non-cystic fibroids; (*c*) often useful, but not always so in non-suppurating peri-uterine inflammations; (*d*) powerless alone in cystic collections of any nature and suppurating lesions of the pelvic organs. (2) In cases where it is ineffectual; this fact allows of confirming, or enlightens, a doubtful diagnosis, by an attentive and harmless study of its operative and post-operative actions, thus imposes or hastens a retarded surgical intervention. (3) If the immediate symptomatic results of its application are usually favorable, the later results are of great interest on account of the ulterior pregnancies that have been observed. Of sixty-seven patients treated by the speaker, only by intra-uterine applications of electricity, all became pregnant one or more times, at variable times, but oftener towards the end of treatment, which testifies as to the symptomatic and functional efficiency of this treatment. (4) Consequently gynæcological electrotherapy, far from being hostile to surgery whose path it tries to lighten and to assure legitimate indications, claims a marked place, either in a great majority of cases in order to avoid useless or dangerous mutilation or, in certain cases, to terminate the surgeon's work by aiding more promptly and efficaciously in restoring the normal functions.

"A New Method of Reducing Retrodeviated Uteri." By Rapin (of Lausanne).

For this surgeon the atmospheric pressure is the hinderance to straight-

ening retroversions, and especially retroflexions, or more properly speaking, the pressure of the neighboring organs, intestines and their contents, combined with that of the atmosphere. The uterus falls into the recto-uterine fossa, adapts itself to this fossa, and the semilunar and utero-sacral ligaments hold it here in such a manner that all attempts at reduction made through the vagina or rectum, either with the hand or with the sound only, end in one result, that of lifting the organ as well as the fossa in which it is contained, and from which it cannot be dislodged. In order to accomplish reduction, according to Dr. Rapin, the third step of reduction must be modified,—that is to say, that instead of lowering the handle of the sound, the entire instrument should be drawn from behind forward and from below upward in such a manner that the entire anterior aspect of the uterine cavity may be acted upon, not by the point of the sound, but with all that has entered the organ. According to the speaker, this removes the fundus from the rectum; Douglas's cul-de-sac is lifted up (by a speculum or finger in the rectum?) and the intestines pushed by the atmospheric pressure fall in, thus taking the place of the uterus and pushing it forward. This is, in a few words, the practice of Dr. Rapin, who lays so much importance on atmospheric pressure, although deviations and especially flexions of the uterus are often, as is well known, favored by inflammation of the organ, and bound by adhesions which are the greatest obstacle to reduction.

(*Nouvelles Arch. d'Obstet. et de Gynéc.,* May 25, 1894, No. 5.)

Fifth Congress of Russian Physicians.

SECTION OF SURGERY.

"Uterine Fibroids; Supravaginal Amputation; Simplified Technique."
By Dr. Ott.

The writer proceeds in the following manner: Asepsis of the cervical canal, curettage and cauterization of the mucous membrane, laparotomy, three ligatures (not more) on the adnexa on both sides, at the same time including a little of the uterine tissue, so as to comprise the larger vessels. Supravaginal amputation; four ligatures around the cervical canal without enclosing it, and comprising the entire thickness of the walls of the cervix. Drainage with iodoform gauze from top to bottom of the cervical canal, and packing the vagina. The stump is treated like a pedicle of a cyst, and then put back into the peritoneal cavity. Suture of the incision. The orifice of communication between the cervical canal and the peritoneum soon obliterates. The advantages are: quickness and simplification of the operation; guarantee against exterior and auto-infection, as well as hæmorrhage, primitive or secondary. Mortality 3.4 per 100.

SECTION OF GYNÆCOLOGY AND
OBSTETRICS.

"Ovariectomy during Pregnancy."
By Dr. Gordon.

The speaker related five cases of ovariectomy during pregnancy performed by Professor Lebedeff. One case was bilateral dermoid cysts; the second was an interligamentous cyst; two were monolocular cysts, and one was a multilocular cyst. All ended in

cure. As to pregnancy, in three abortion occurred on from the fifth to the fifteenth day after the operation. In the other two pregnancy continued and arrived at term. The speaker then gave a statistic of similar operations performed in Russia: 204 cases, 21 of which could not be followed as to the result of pregnancy; 7 cases of wounds of the uterus with 2 deaths. Of the other 176 cases, 164 complete successes, with continuation of pregnancy in 122, and 12 ending fatally.

"Massage in Gynæcology, and Brandt's Method." By Dr. Evmenieff.

The speaker preferred Brandt's method to the Swedish method,—that is to say, gynæcological gymnastics, with active and passive movements. Of the patients treated by Brandt's method 52 per cent. had metritis; 24.5 per cent. were versions, flexions, and prolapsus of the uterus; 12.9 per cent. were metrorrhagia. The inflammatory processus was benefited in a definite manner by this treatment, but the displacements of the uterus were not, as there was a tendency to relapse in cases of prolapsus. The speaker preferred in the latter class of cases to perform colpoperineorrhaphy. In flexions of the uterus, massage, without producing displacement of the organ, gave good results on account of the stretching of the cicatrices and adhesions, diminishing the peri-uterine symptoms, and amelioration in the general condition of the patients produced by it. The speaker said that country practitioners should especially employ Brandt's method. Uterine massage is, above all, advan-

tageous in the laboring class, as it does not oblige the patient to keep her bed, but it should be done by the physician himself, or under his direction.

"Cysts of the Broad Ligaments, and their Operative Treatment." By Dr. Parischeff.

Of thirty-seven cases of cysts of the broad ligament operated on in Professor Lebedeff's service, the speaker drew the following indications as to their diagnosis :

(1) When the inferior segment of the tumor is situated more or less deeply, mobility is slight or does not exist (27 cases).

(2) Connection between the lateral face of the uterus in latero-deviation and upward ascension of the organ (13 cases).

(3) Increase in length of the uterine cavity (11 cases).

(4) Displacement of the corresponding cul-de-sac, spontaneous or artificial pushing the tumor upward.

(5) Displacements of the bladder.

Operations.—(1) Ligature of the pedicle and excision of the tumor, as in ovarian cysts (10 cases).

(2) Partial resection with reduction of the remainder of the tumor into the abdominal cavity or fixation of this remainder to the inferior angle of the incision (12 cases).

(3) Enucleation of the cyst (12 cases). Four cases of death, two of which were tardive.

"Tubal Pregnancy ; Treatment." By Dr. Smolski.

The speaker passed in review all the methods of treatment of tubal pregnancy and said that all tended to destroy the fetus. The oldest treatment is puncture of the foetal sack ; doubtful results and now abandoned.

The same as regards injections of morphine into the sack.

One case is on record of cure by injecting a 5-per-cent. solution of chloride of zinc. In the United States electricity is employed to kill the foetus and thus arrest pregnancy ; but it sometimes happens that the sack bursts under the influence of the contractions and a retro uterine hæmatocele results. It is a bad method, still more so when it is remembered that even if the sack does not rupture, it remains in the body of the mother. *The only rational operation before spontaneous rupture is laparotomy and resection of the tube.* In cases of rupture *under the physician's eye*, one must do as circumstances require. The speaker concludes as follows : (1) A non-ruptured tubal pregnancy is an indication for laparotomy. (2) In rupture and intraperitoneal hæmorrhage in the first half of pregnancy, perform laparotomy, if antiseptic conditions permit. (3) Rupture with retro-uterine hæmatocele, expectation, with surgical intervention only in serious cases ; if there is suppuration or immediate danger to life, incise the posterior cul-de-sac in preference to laparotomy.

"Curettage in Fibro-Myomata." By Dr. Orloff.

Previous antisepsis. Progress in dilatation of the cervix with Hegar's bougies ; lavage of the uterine cavity. Curettages with Sim's curette, which is easily bent ; an important fact in order to curette all the pockets and lumps due to the presence of fibroids. This is followed by a uterine irrigation, and an injection of from four to eight grammes of a solution composed of tincture of iodine and alcohol at 95° equal parts. Tamponing of the

cavity of the cervix and vagina. The tampons are removed the next day. Antiseptic irrigation twice daily on the following two days. The indications for curetting are: (1) Abundant metrorrhagia or menorrhagia, especially in cachectic women; curettage permits of regaining strength so that a radical operation may be done at a later date. (2) In small fibroids, which on account of their size do not produce pain or other symptoms, repeated curetting helps the patient along until the menopause, at which time fibroids atrophy in the majority of cases. Counter-indications are: slight hæmorrhages, neuralgia, dyspnoea, etc. Results: decrease in size of tumor and uterine cavity; cessation of the metrorrhagia at the reappearance of normal menstruation at the end of six months or a year.

"Parasites of Cancer of the Cervix."

By Dr. Miller.

The speaker found in a case of cervical cancer composed of cylindrical cell; (1) intracellular formations, *probably* parasites; (2) extracellular formations, cysts, parasites *certainly*; (3) other intracellular formations of less importance. In twenty other cases of cancer of the uterus examined by the speaker, the formations of the first category were not found again. The cysts were found in three other cases. The formations of the third category were present in all except one. For the speaker, the cysts are protozoairs. The microscopical preparations were examined by Professors Gobi, Winogradoff, Lebedeff, Tichaschine, and Cholodowski. All were decidedly in favor of the cysts being parasites.

(*Nouvelles Arch. d'Obstet. et Gynéc.*, May 25, 1894.)

Seventh Annual Meeting of the American Association of Obstetricians and Gynæcologists.

THE American Association of Obstetricians and Gynæcologists will hold its Seventh Annual Meeting at Toronto, Ont., Wednesday, Thursday, and Friday, September 19, 20, and 21, 1894, to which the medical profession is cordially invited.

The following is the preliminary programme, subject to amendment until September 1, namely: (1) President's address, George H. Rohé, Catonsville, Md.; (2) Personal Experience with Pus Tubes: When to Operate, How to Operate, and the Results of Operation, Jas. F. W.

Ross, Toronto, Ont.; (3) Relation of Hysteria to Structural Changes in the Uterus and Adnexa, A. P. Clarke, Cambridge, Mass.; (4) Demonstration of a Mechanism of Intussusception (rabbits), Robert T. Morris, New York; (5) Nephrectomy, L. H. Dunning, Indianapolis; (6) Treatment of Distention of the Fallopian Tubes without Laparotomy and Removal, Frank A. Glasgow, St. Louis; (7) Hysteria in Pregnancy, W. P. Manton, Detroit; (8) Relations of Renal Insufficiency to Operations, Carlton C. Frederick, Buffalo; (9) a, Impor-

tance of Recognizing Septic Puerperal Endometritis Early, and Its Treatment; *b*, Demonstration of a Portable Operating Table for Gynæcological and Abdominal (Trendelenburg) Work, Edward J. Ill, Newark, N. J.; (10) Suspension of Retroflexed Uterus by the Utero-ovarian Ligaments, with Report of Cases, Reuben Peterson, Grand Rapids, Mich.; (11) The Element of Habit in Gynæcic Disease, Geo. F. Hulbert, St. Louis; (12) Some Results of Ether Anæsthesia in Abdominal Operations, I. S. Stone, Washington, D. C.; (13) Report in Abdominal Surgery, Presenting Cases, A. Vander Veer, Albany; (14) Supplementary Paper on Abdominal Section in Intrapelvic Hæmorrhage, M. Rosenwasser, Cleveland; (15) Conservative Midwifery, J. M. Duff, Pittsburg; (16) The Cause of the Thirst following Abdominal Section, Eugene Boise, Grand Rapids, Mich.; (17) The Care of Pregnant Women, W. B. Dewees, Salina, Kan.; (18) Subject to be announced, L. S. McMurtry, Louisville, Ky.

DISCUSSION.

(19) Inflammatory Disease of the Uterus and Appendages and of the Pelvic Peritoneum: (*a*) Introductory Remarks, William Warren Potter, Buffalo; (*b*) Historical Sketch, Edward J. Ill, Newark, N. J.; (*c*) Clinical

History, Charles A. L. Reed, Cincinnati, O.; (*d*) Causation and Pathology, Lewis S. McMurtry, Louisville, Ky.; (*e*) Diagnosis and Prognosis, James F. W. Ross, Toronto, Can.; (*f*) Treatment, M. Rosenwasser, Cleveland, O.; A. Vander Veer, Albany, N. Y.; J. H. Carstens, Detroit, Mich.; A. H. Cordier, Kansas City, Mo.; (*g*) Results—(*a*) When Untreated; (*b*) Under Various Methods of Treatment, Joseph Price, Philadelphia, Pa.; (20) Inter-current Typhoid Fever in Pregnancy, Thomas E. McArdle, Washington, D. C.; (21) Notes on a Case of Cholelithiasis, Frederick Blume, Allegheny, Pa.; (22) Perineal Operations, Joseph Price, Philadelphia; (23) Remarks Bearing on the Surgical Treatment of Intussusception in Infants, based on Two Successful Cases, Henry Howitt, Guelph, Ont.; (24) The Limitations of Surgery in the Treatment of the Uterus and its Appendages, William H. Myers, Fort Wayne, Ind.; (25) The Incision in Abdominal Surgery,—Methods and Results, J. H. Carstens, Detroit, Mich.; (26) Abdominal Section in Ectopic Gestation, where the Fœtus is Living and Viable, X. O. Werder, Pittsburg, Pa.; (27) Subject to be announced, William E. B. Davis, Birmingham, Ala.; (28) Hysterectomy for Cancer of the Uterus, E. W. Cushing, Boston, Mass.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

CONDUCTED BY RICHARD C. NORRIS, M.D.

ABSTRACTS FROM CURRENT LITERATURE.

Hereditary Malformations of the Hands and Feet.

J. STEWART NORWELL (*British Medical Journal*, July 7, 1894) reports an interesting case of hereditary malformation, in which both father and son had malformations in both hands, affecting the middle and ring fingers, which are webbed to the tip. The conjoined nails exhibit a slightly elevated ridge running from the lunula and ending at a notch in front; at the tip of the conjoined fingers there is a small linear depression running from the nail-notch to the palmar surface of the tip. The numbers of phalanges is usual, but the angle of articulation is not normal, nor is their length. The other fingers are normal, except that the little finger is webbed to the ring finger for the length of the first joint. The feet had each six toes, all being more or less webbed except the fourth. The sixth toe in the case of the son had become so much rotated as to cause pressure on the nail in

walking, and was accordingly amputated.

The family history shows that the malformation of the hands is always associated with malformation of the feet, and shows very little variation in form. It apparently descends in the female line; it began in the great-grandmother of the elder patient, but skipped a generation in his grandmother; but all of her children save one had it, and three out of seven of that one's children had it. Again, all the brothers and sisters of the elder patient had it; but, on the other hand, he has transmitted it to his whole family of four, while his sister has transmitted it to only two of a family of three. Twenty-one out of twenty-eight persons in the family history have had the deformity. The mother of the younger patient was previously married, none of her children of that marriage had any malformation.

A Case of Perineal Displacement of the Testicle.

BILTON POLLARD (*Lancet*, July 14, 1894) reports an interesting case of ectopia perinealis of the scroto-femoral variety. The testicle was not very movable. Its spermatic cord could be traced upward to the external abdominal ring. An incision was made from just below the ring to the testicle. The testicle and cord with their coverings were then raised from their bed, as in the operation for castration, and turned upward as far as the external abdominal ring. An incision was next made into the lower part of the scrotum, and a new bed was prepared for the testicle there. A sinus forceps was then passed from this wound through the cellular tissue

of the upper part of the scrotum to the upper part of the first incision near the external abdominal ring, and its blades were separated, so as to dilate a track for the artificial descent of the testicle. Through this track the testicle was pushed down to its fresh bed in the bottom of the scrotum. Both wounds were closed and healed by first intention. There was no possibility of the testicle returning to its former position. The patient left the hospital in ten days. He was seen seven and one-half years afterwards, and was in perfect condition, the cremaster reflex being excited in the ordinary way. The child was one month old at the time of operation.

Scorbutus in Infants.

NORTHRUP and CRANDALL (*New York Medical Journal*, May 26, 1894), after the study of thirty-six carefully tabulated cases of this disease, come to the following conclusions :

(1) Scurvy may appear at any period of infancy or early childhood, but is most common between the ninth and fourteenth months.

(2) The lesions are hæmorrhagic in character, due probably to diapedesis. The most characteristic are subperiosteal hæmorrhages. Hæmorrhages into the muscular tissue, into the skin and mucous membranes are more or less constant.

(3) It occurs in every grade of the social scale, but is more frequently among the rich than among the poor. The neglected child who eats everything at the table may become ra-

chitic or marasmic, but he obtains enough fresh food to protect him from scurvy. It very rarely occurs in asylums and hospitals, because in recent years feeding in such institutions has been more rational than in many private families.

(4) Lack of fresh food is the most important cause. The use of the proprietary foods and condensed milk produces more scurvy than all other causes combined. Even fresh milk in small proportions is not sufficient to insure protection.

(5) Anæmia and malnutrition are almost invariably present. A peculiar sallow complexion is common.

(6) Scurvy is frequently super-added to rachitis, but in a considerable number of cases no evidences of rachitis are present. So-called acute

rickets is in most cases, probably in all, rickets complicated by scurvy.

(7) Pain is a constant symptom ; it develops early, and is usually intense.

(8) A varying degree of immobility of the extremities is common, and is frequently so marked as to simulate paralysis. This pseudo-paralysis disappears with the subsidence of the scorbutic symptoms.

(9) Subcutaneous hæmorrhages, as well as hæmorrhages from the cavities of the body, are very common, but are not necessary to a diagnosis of scurvy.

(10) The condition of the gums is characteristic. They are purplish, soft, spongy, and bleeding, and frequently show decided ulcerations. When the teeth have not been erupted, changes in the gums are usually slight or entirely absent.

(11) Painful swelling of the lower extremities is the most constant symptom. The upper extremities are rarely involved. The thigh is affected

more frequently than any other region.

(12) Children suffering from scurvy commonly present the following symptoms : anæmia, intense pain on motion, spongy, bleeding gums, swelling of the lower extremities, usually the thigh. There may also be purpura or ecchymoses, discharge of blood from the various cavities of the body, and pseudo-paralysis.

(13) Scurvy, when untreated, is a very fatal disease ; when recognized and properly treated, a rapid and complete cure is usually effected. The result of antiscorbutic treatment is, in fact, one of the most certain means of diagnosis.

(14) Scurvy may be mistaken for rheumatism, stomatitis, rickets, sarcoma, osteitis, and infantile paralysis.

(15) Scurvy is a dietetic disease, and must be cured by dietetic treatment. Fresh milk, beef-juice, and orange-juice are the most effective remedies.

An Addition to Present Methods of Treating Large Congenital Fissures of the Hard Palate.

IN an interesting article, with a report of the case of a child 5 years old, H. M. M. MILTON, M.R.C.S. (*Lancet*, July 14, 1894), details a new method for treating cases of hare-lip and cleft-palate in which the deformity is due to a deficient approximation of the hard parts during foetal life ; as opinions derived from the study of this single case he says : (1) That in cases of fissure of the hard palate, especially, perhaps, in those in which the fissure is complete, the non-approximation of the two maxillæ may be an important factor in the production of the gap. (2) That in

such cases the approximation of the separated portions by forcible pressure may be possible. Such approximation is very simple in performance, is not likely to be harmful in its results, and may greatly facilitate the subsequent operation for complete union of the soft parts. (3) It remains to be seen whether the forcible manipulation of the jaw is disadvantageous to the future development, and it may be that in some cases the approximation may entail so much deformity in the jaws as to greatly discount the possible advantages. In the case under consideration he was led to

believe that it was due to non-approximation by the following considerations: (1) The separation between the two halves of the bifid uvula largely exceeded the width of any possible undivided organ; (2) the upper teeth overlapped the under teeth laterally to the extent of three lines, one either side; (3) the upper canines coincided when the jaws were closed with the first lower premolars; (4) the expansion of the *alæ nasi* was one and three-quarters times as great as in a normal child of the same stature; and (5) the alveolar process of the intermaxillary bone projected four lines beyond that of the lower jaw and lay two lines higher than those of the superior maxilla. The author, by means of two forceps similar to lion

jaw, succeeded by gentle yet forcible pressure in approximating the hard parts so that the greater part of the sides of the fissure was in apposition.

The snout was then pressed easily into place between the two maxillæ, and the whole was held in position by a strong wire passed in the groove between the teeth and the gums, and passing posteriorly from the last premolar on the left side to the last on the right, and twisted in front to a sufficient tightness. The patient made a reactionless recovery from the operation, ate food readily, and at the end of thirty-eight days, when the wire was removed, the bones remained in position, and the final plastic operation was easily done.

On the Disinfection of Scarlet Fever Patients before the Completion of Desquamation.

AN interesting paper on this subject, by WILLIAM GIBSON (*The Practitioner*, July, 1894), discussed the possibility of disinfecting scarlet fever patients at or about the end of the third week before desquamation is complete, thus avoiding the inconvenience and trouble arising from a protracted isolation. In every case in which the author has tried it, the following method has been found successful: Three baths in succession, sometimes four were given, comfortably warm, and sometimes daily, at other times on alternate days, using freely carbolic acid soap, and washing the patient most thoroughly from top to toe. After each bath, except the last, the patient was put back to bed,

on the bed in which he had lain with the disease; after the last bath he was taken from the bath into a clean room, there dressed with clothes free from infection, and allowed to mix with the rest of the family. Any patient with complications, such as otitis or ulcerated or suppurating throat, was not subjected to the process.

The first case was that of the author's son, who was allowed to mix with a family of six children and five adults; no one took the disease, although desquamation continued three weeks after the disinfecting baths. In no case did any complication follow, and in all convalescence was apparently hastened.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

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No. 12

ORIGINAL COMMUNICATIONS.

La Grippe during the Puerperal State.¹

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DURING the last epidemic of influenza I had several cases following confinement. One occurred on the fourth day of the puerperal state, two on the twentieth, and the others later.

All except the first one were easily diagnosed and of no interest, except that in one of these the patient called in the evening on a friend who had la grippe, and the next morning had it herself.

On account of, first, the difficulty of differentiating between la grippe during the lying-in period and puerperal fever; second, the lack of literature

on the subject; and, third, the relief an exact diagnosis would give the doctor and the patient, I decided to report my first case, and also what I can in regard to the relations between, and the diagnosis of, la grippe during the puerperal state and puerperal fever.

HISTORY OF THE IMPORTANT CASE.

During Pregnancy.—Threatened miscarriage, minor symptoms of uræmia, but no albumen, and some hysteria.

During Labor.—*First Stage:* Lasted three days from adhesion of the membranes about internal os. Patient did not send for me, thinking the "pains"

¹ Read before the Colorado State Medical Society, June 19, 1894.

were "false." *Second Stage*: Hand introduced into vagina to rotate head, position being l. o. p. This was followed by the use of the forceps. No laceration of perineum. *Third Stage*: Placenta complete; very little if any of membranes missing. Intra-uterine bichloride douche given.

During Puerperal State. — *First Day*: A.M., temperature 99.4° F.; pulse 84; after-pains severe but not frequent; tenderness in uterus. P.M., temperature normal; pulse 80; after-pains and tenderness as above; *pain in left half of head and left side of body to the hip.*

Second Day: A.M. and P.M., temperature normal; pulse 80; after-pains and tenderness in uterus less; pain in left side of body absent.

Third Day: A.M., temperature normal; pulse 80; breasts full and a little sore; fundus of uterus one inch lower than on previous day; after-pains not present; tenderness in uterus less; difficulty in starting urine; *pains in limbs and back.* P.M., temperature 101.8° F.; pulse 90; bowels moved once; other symptoms as above.

Fourth Day: *Temperature*, 2 P.M., 103.5° F.; 8 P.M., 105° F.; 12 P.M., 100° F.; chills all day; sweating profusely at 12 P.M., increased probably from enema of warm water; pulse, 2 P.M., 100; 8 P.M., 110; 12 P.M., 100; bowels moved, A.M., once; P.M., twice; urination difficult; *pain severe in left side of head, and in arms, legs, and back*; great distress in the stomach, making the patient groan frequently; breathing slow and irregular; no cough, but auscultation showed slight roughness; patient extra talkative and wide awake; *fundus of uterus smaller and still less tender; lochia without odor and containing only a slight amount of*

red blood; cervix looked badly inflamed, and os not closed; water from uterine douche clear, excepting a few shreds and a little blood; patient easy 12 P.M. The condition of the cervix was very probably due to a rolling out of the mucous membrane of the cervical canal, as she had an extremely bad laceration, the result of a previous labor. *Diagnosis.*—In the afternoon I thought it was puerperal fever, later decided it was la grippe.

Fifth Day: A.M., temperature, 100.8° F.; pulse 90; bowels moved eight times from salts; pain in head returning; no chill since 12 P.M.; tenderness in uterus nearly gone, urination improved. P.M., temperature normal; pulse 72; felt much better, but was weak.

Sixth Day: A.M., temperature 99.4° F.; pulse 84; sat up in bed, talked a good deal, and felt best of any day; fundus half way to symphysis.

Seventh to Fourteenth Day: Everything normal, except on the *tenth*, some "mutton-like" discharge, probably clotted blood.

Treatment. — A vaginal douche daily. First day, antikamnia gr. v. for headache. Third day, salts q. s. for bowels. Fourth day, calomel and salts, tr. gelsemii ℥x to break up fever; uterine douche to remove any retained secundines; morphia gr. ¼ hypodermically twice for pain; enema of hot water for chills, and to cause sweating; red pepper in milk for distress in stomach.

Convalescence. — Patient a little weak, and had a mild cystitis a month or two later, and some "bearing down." These were also present after a previous labor.

Diagnosis.—I base my diagnosis of la grippe upon the presence of marked

and repeated chills, the severe pain in the head, body, and extremities, the disturbance in the stomach and lungs, the short duration of the disease,—four to seven days is given as the average duration of la grippe,—and upon the presence of the epidemic.

We will exclude the different forms of puerperal fever as follows :

(1) Endocolpitis, endometritis, metritis, parametritis, pelvic and general peritonitis, and uterine lymphangitis may be excluded on account of the absence of the following symptoms : suppressed or offensive lochia, objective signs on vulva or vagina, severe after-pains, retarded involution, increased sensitiveness in region of the uterus, abdominal tympanites, and exudate.

(2) Septicæmia lymphatica,—septic infection through the lymphatics (Lusk). This is probably the same as the benign puerperal fever of Parvin, and closely simulates la grippe, except that it does not have the characteristic pains in the different parts of the body, nor disturbances of the stomach, which are present in la grippe. The mortality is also much greater, the termination being most frequently death in two to twenty-one days.

(3) Infectious phlebitis, called also septicæmia venosa, phlebitis uterina, pyæmia metastatica, needs a careful differentiation. It has generally an insidious onset, but in other cases onset sudden with chill and high fever ending in profuse perspiration,—as in intermittent fever,—and then the fever becomes irregular. Pain is moderate or absent, and lochia is generally offensive. Chills occur frequently at irregular periods, followed by metastasis to various organs of the body.

Parvin diagnoses it from intermittent fever or a common cold—and we can rightly add la grippe also—by saying that in both a high temperature is followed by a decline, with more or less perspiration, and with each rise of fever the chills recur ; but in infectious phlebitis, between the *attacks*, the pulse does not return to the normal, and the chill never occurs at a definite time. The pain in infectious phlebitis being moderate or absent is sufficient to diagnose it from la grippe.

(4) Sapræmia. While this often does not produce any local symptoms, still neither does it produce pains in the extremities, and it is generally caused by something being retained in the uterine cavity.

I think the pains and soreness of la grippe alone sufficiently characteristic to make a differential diagnosis between it and any form of puerperal fever. “Rheumatic pains” in the muscles, joints, and loins are given by Strümpell as a symptom of septic and pyæmic diseases.

Now, while we exclude this case of la grippe from the different forms of puerperal fever, it still remains to be proved whether la grippe will cause puerperal fever, thereby producing the symptoms of both, or whether it will remain a distinct disease. Lusk says, “The zymotic fevers may provoke in the puerperal woman the same inflammatory lesions commonly associated with puerperal fever.” Further on he says that in New York City, in 1872, during the prevalence of epizootics, of epidemic catarrhal affections, of peculiar fatal forms of pneumonia, and other diseases which are now attributed to the presence of minute organisms, “the childbed mortal-

ity increased from 400 to 500 solely from puerperal fever. The ordinary accidents of labor and the hospital mortality were not increased, and there was no special mortality from either diphtheria, erysipelas, or scarlatina, but the aggregate mortality was the greatest known." Parvin quotes a late writer as saying, "Some authors . . . assert that the poison of some zymotic diseases . . . become so changed by the condition of the puerperal state as to produce puerperal fever, . . . but it is not supported by any convincing observations. Neither have any cases of scarlatina, typhus, or typhoid fever been produced by puerperal fever." Erysipelas has been produced in rabbits from germs cultivated from puerperal fever cases,¹ and Schroeder says experience has taught us that fluids from erysipelas, diphtheria, and scarlet fever should be especially feared. While Duncan and Lusk could find no relation between the frequency of deaths from scarlatina, diphtheria, or erysipelas, Winckel has found that with an increase in the number of puerperal fever cases there is an increase in the number of cases having erysipelas of the genitals.

I think it very probable that when a puerperal woman is attacked by an infectious fever she first has that disease uncomplicated, locally in the genitals if it is erysipelas or diphtheria, or constitutionally if any of the others; and then septic infection at the site of the wounds in the genital tract occurs and the patient has some form of puerperal fever. Proofs: (1) Erysipelas of the vulvo-vaginal canal occurs first as a local disease,

and frequently goes no further, but sometimes it does extend, and then we have all the symptoms of septicæmia and find the streptococcus erysipelas in all the invaded tissues.¹ (2) In the exanthemata occurring during pregnancy there is frequently endometritis.

The germ of la grippe is the bacillus of Pfeiffer, a specific bacillus something like that of septicæmia. It finds entrance into the body principally by the respiratory and digestive tracts, possibly also by the vagina. It has been injected into animals and produced symptoms like those of la grippe in man.²

While writing the above I did not refer to any direct literature upon the relations of la grippe to puerperal fever, because I wished to keep that separate, so it could be compared with what I have written.

Dr. Barbat³ has reported four cases of la grippe following confinement.

CASE I.—Primipara, 17 years old, and married. Labor normal except laceration of perineum, which was immediately repaired. Symptoms: pain in all parts of the body, a little chilliness, and a temperature of 101° F. twelve hours after labor; temperature 104° F. thirty-six hours after labor, with slight delirium, increase of pain, and soreness over the body, but no tenderness in region of uterus, and lochia normal. Uterine curettage and irrigation were negative, but a severe chill and a rise of temperature to 105° F. followed their use, and the patient had low muttering delirium, and, later, symptoms of collapse.

Full doses of quinine and whiskey

¹ Winckel's Midwifery, American Text-Book of Surgery.

² Winckel's Midwifery.

³ Annual of Universal Medical Sciences, 1893.

⁴ Pacific Medical Journal, March, 1894.

revived the patient, but it was over a month before she began to gain strength. During this time no local symptoms developed.

CASE II.—On the tenth day of the puerperal state the patient had malaise, pains, especially in back and head, but also in other portions of the body; temperature 102° F., slight cough, injected conjunctiva, and flushed face.

Antikamnia and stimulants were given for two days, and then the patient was able to be up but remained weak.

CASE IV.—Two days after a miscarriage at seven months the patient had backache and injected conjunctiva, but abdominal tenderness was absent. Results good. Dr. Barbat thought that possibly the premature delivery was due to the disease.

In the discussion which followed, Dr. Davis thought that the non-prominence of the cough and other bronchial troubles were due to the patients being kept within doors and in bed, and that, while he was not sure that the first case was la grippe, he thought the effects of the treatment indicated such to be the fact. Dr. De Witt had a case beginning on the tenth day. Lochia was not offensive, but was slightly increased. Dr. Kenyon said that in la grippe there was a peculiar, light, furry, silver coating to the tongue, and that he considered this a sign of considerable value, as the general symptoms vary so. Dr. Cushing thought the cases were exceptional ones, but probably septicæmia. Dr. Kuhlman claimed that la grippe required a prodromata of from ten days to two weeks. He thought these cases were from septic infection due to a diathesis, and said, "All of us

who have had any experience in obstetrics and gynæcology know that certain females who are suffering from a certain diathesis, such as tuberculosis, syphilis, and so on, manifest symptoms of septicæmia without any special reference to the lochia."

If these four cases were due to diathesis, there must have been an epidemic of diathesis in Dr. Barbat's locality. Dr. P. Gourdin de Saussure, in the *American Journal of Obstetrics and Diseases of Women and Children*, November, 1893, disproves the above statement when he says that 70 per cent. of the negroes of the South have acquired or inherited syphilis, but in over 14,000 births there were only fifty-seven deaths from puerperal fever.

The following two cases, taken from the *Annual of Universal Medical Sciences*, 1893, would tend to show that la grippe would cause septic infection.

CASE I.—A girl 19 years of age, having broncho-pneumonia, aborted, and three days later had phlegmasia alba dolens, and on the eighteenth day pyæmic abscesses in the sternal region. She was of tubercular diathesis.

CASE II.—Patient was exposed to the contagion of influenza on the seventh day after an abdominal section for removal of the uterine appendages. On the ninth day pneumonia was diagnosed, and the lower angle of the incision began to suppurate, but no pelvic symptoms. Patient died of heart failure.

Dr. Addinsell read a paper on "The Effects of the Influenza Poison upon the Lying-in Woman," before the Obstetric Society of London, April, 1893. I have been unable to obtain

this article in full, but will give below what seems to be the official report of the society, because I find the same in different magazines and journals. "He described several cases which had been under his care, and showed how they differed from puerperal septicæmia. He also cited the case of a lady who had suffered from dengue in her confinement, and its effects on the lochia and milk, pointing out the strong resemblance between this disease and influenza. He considered influenza attacked the weakest spot, and he quoted instances of several patients, seized with the disease at the time of menstruation, who suffered, and still suffer, from ovaritis traceable to that time; and he finally threw out the suggestion

that the nervous symptoms so often seen in puerperal septicæmia, and which were very marked in the most severe of his series of cases, might be due to the necrotic elements of the endometrium not being carried off in the usual lochial discharge, and thus being absorbed and carried into the cerebral circulation."

Dr. Addinsell, speaking of the effect on the ovaries, reminds me of a case. The patient had pains in the anterior part of the thighs. This is where she has pains during labor or when unwell. I at first thought she must be pregnant and about to abort, but an examination disproved pregnancy. On the next day her husband was also taken ill with the influenza.

Abdominal Drainage.

BY ERNEST W. CUSHING, M.D.,¹

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THERE is no practical question connected with abdominal surgery on which opinions differ more widely than on that of abdominal drainage. It would seem that by this time there should be a reasonable unanimity in the opinions of the leaders of the profession on this subject, and yet their practice differs widely, while their statements, and especially the statements of their followers, diverge even more widely than their practice.

Three years ago, in Berlin, I had the honor, in conjunction with Dr. Sänger, of bringing this subject of abdominal drainage before the Tenth International Medical Congress, and I naturally examined pretty carefully the practice of the best German operators on this point; I was led to the conclusion that the use or omission of drainage is merely a part of a system, and not an arbitrary decision at the end of an operation. Abdominal drainage is very little used in Germany, except by Sänger; and with the mighty influence which German

¹ Read before the Section for Surgery of the Suffolk District of Massachusetts Medical Society, March, 1894.

thought and example is exercising among the profession everywhere, the German influence is becoming marked in all countries, and not the least in New York City, which, it must be remembered, has the largest German population of any city in the world but Berlin and Vienna, with a particularly brilliant representation in our profession by German medical societies and journals, and especially by a number of gentlemen who are very distinguished in abdominal surgery, and whose names will readily suggest themselves to my hearers.

On the other hand stands the English school of abdominal surgery with its brilliant leaders, its admirable results, and its splendid contributions to the progress of abdominal surgery. Naturally recent professional opinion in this country has been largely moulded by English thought and writing, and by the fact that so many of our leading gynecologists have studied the methods and watched the operations of the great English surgeons. We have, therefore, besides the German school, the Anglo American school of practice, and it may be interesting to notice wherein lie the differences between them. In the first place, the Germans, starting out with a positive faith in the theory of bacteriological abdominal cavity as the cause of infection of wounds, and of the septic troubles, set about to prevent any such infection with true German thoroughness. Abdominal surgery is confined to a few men, it is performed in buildings made as perfect as science can devise or money can furnish; the clinical operator has a staff of highly-trained assistants, who remain for a period of from three to five years con-

nected with the clinic. Discipline prevails, which is military in its exactness. The abdominal work is on the whole of a rather simpler nature than that which we have in our large cities, for the reason that, as the hospitals are supported by the states, there is a large proportion of hardy peasant women with tumors who are sent immediately to the great clinic, while the rarity of abortions and the control and careful treatment of venereal diseases render pelvic suppuration far less common than is the case here. Speaking broadly, then the German surgeon has on the average simpler cases, stronger patients, better assistants, a better operating-room, and a far greater certainty of aseptic surroundings, than is the case in this country. His methods are naturally based on all these facts; he makes a long incision, he and his assistants ligate with catgut all adhesions, everything is done by sight, and when the tumor or organ is finally removed there is little chance that there will be any bleeding, for everything is tied; then the abdomen is closed, and the results are excellent. Even in cases where collections of old blood are evacuated or where pus-tubes during removal burst and discharge their contents similar methods are followed. The use of Trendelenburg's position with a large incision makes pelvic surgery more certain, and the removal of all foreign matter can be more surely accomplished than when the small incision is used, unless the latter is followed by irrigation; even in unclean cases, therefore, most of the German operators dispense with irrigation, and their results appear to them satisfactory, although I gravely doubt whether they would be able to pursue any such

methods, if they really had such a proportion of difficult cases of pelvic suppuration to treat as we have here, and in the same class of emaciated women of little vitality.

To sum up : The omission of drainage is based upon the use on a large incision and complete tying of all adhesions with catgut, and entire removal of all foreign matter from the abdomen without irrigation, the assistants being skilled, the preparations perfect, the operating-room ideal, the operator being a clinical professor of long experience and particular skill, and the patient being, on the average, robust and in good condition.

The Anglo-American school of abdominal surgery has grown up under the auspices of men who are practical rather than theoretical. While not denying the facts demonstrated in the bacteriological laboratory, as to infection by pathogenic micro-organisms, they have insisted that we must consider the field of infection as much as the infecting agent, and, speaking broadly, their efforts have been to remove the pabulum of germs besides taking reasonable precautions to prevent any infection of the abdominal cavity. They have been extremely sceptical as to the possibility of keeping all microbes out of the abdomen, but have pinned their faith on the ability of the living tissues to resist the subtler forms of atmospheric infection, provided all dead and foreign matter were removed, the pelvis kept dry, and the vitality of the patient maintained.

Recognizing the fact that most cases of acute sepsis after abdominal operations are found to have a collection of decomposing bloody fluid in

the pelvis, the inference is obvious that if this fluid had been removed the patient might have recovered ; moreover, as it is evident that this bloody fluid ought to have been absorbed by the peritoneum before decomposition occurred, the practical rule followed is to avoid everything that would chill or chafe the peritoneum, or in any way weaken its absorptive powers or injure its serous surface. From this came the advocacy of the short incision and the use of irrigation instead of sponges for the removal of blood, pus, the contents of cysts or other foreign matters in the abdominal cavity ; also in the endeavor to shorten the time of operation, it was found practicable to separate adhesions very largely by the fingers, without the use of ligatures, even although there might be some bloody oozing afterwards, so long as the latter would be removed by the drainage-tube. It should be remembered that the great development of abdominal surgery in England, and especially in America, during the last ten years, has been in surgical treatment of diseases of the uterine appendages, and in hysterectomy, as well as in surgery of the kidney, appendix, and intestine. The treatment of tumors has not changed, and is much the same everywhere, but the new surgery of the uterus and its appendages has so completely overshadowed that of ovarian tumors that active operators do not find that one-fifth of their cases of laparotomy are performed for the removal of ovarian tumors. At least that is my experience, and I presume it coincides with that of other gynæcologists.

Our subject may be divided into indications and technique. The chief

indication for the use of drainage is the prevention of any accumulation of the fluid in the pelvis. It is certain that in the cases of laparotomy which die of acute sepsis on the second, third, or fourth days, there is always, or usually, found a bloody accumulation or puddle which seems to be the cause and focus of septic intoxication.

This accumulation can be prevented by the use of a drainage-tube. It is true that in most cases the peritoneum is able to absorb all fluids, and usually, with reasonable care and attention to cleanliness, such an event may be anticipated with considerable confidence.

On the other hand, the peritoneum sometimes fails to do its duty in this respect, and then bloody serum accumulates, decomposes, and poisons the patient.

It is impossible to attribute all such deaths to infection at the time of operation. Long series of cases in the hands of careful operators have shown that with every precaution except drainage such accumulation of fluid with consequent sepsis will occasionally occur, while the frequent use of the drainage-tube, even in light cases, has taught us that even after the simplest operations, such as removal of unadherent uterine appendages, there is sometimes a very profuse sanguineous effusion for a day or two, probably from the stitch-holes of the abdominal incision or from a vein in the pedicle where it is transfixed.

The reasons for this use of drainage may, therefore, be cast somewhat into the form of a syllogism, as follows :

After every laparotomy involving an operation on the pelvic organs there may be a profuse sanguineous discharge, or even a serious hæmorrhage.

After every laparotomy the peritoneum may fail to absorb such a discharge. There may be no evidence that dangerous hæmorrhage is occurring.

The failure to absorb such a discharge, if it occurs, is fatal ; concealed hæmorrhage if undiscovered is fatal.

The drainage-tube, properly placed and cared for, will remove this dangerous effusion as fast as it occurs ; it will give timely warning of concealed hæmorrhage.

Therefore, drainage should be used in all cases of laparotomy involving an operation on the pelvic organs.

As usual, however, the general rule and principle is subject to limitations and exceptions, some of which are as follows : The use of a drainage-tube is a decided inconvenience.

If carelessly handled, it may be a source of secondary infection, with formation of exudates.

If incorrectly placed or left too long in position, it may fail of its purpose.

It may even, if wrongly used, be the origin of a fæcal fistula, by pressure, or of a suppurating abdominal wound ; or a sinus may remain in the track of the tube.

Its use greatly increases the necessity of skill and attention in the treatment, and adds to the discomfort of the patient for a day or two after the operation.

By pressure on the intestine, unless removed in time, it may cause an obstruction even with fatal result.

The liability to subsequent hernia is said to be somewhat increased.

This is a formidable list of objections, and yet all these accidents may be avoided by skill and conscientious care in the use of the tube, and

a fatal result from such use in proper hands is an extremely infrequent occurrence; no such accident has ever occurred to me.

On the other hand, acute sepsis after laparotomy is an accident so dreadful and so irremediable that it is far more to be feared than the lesser and more remote evils resulting from the use of the tube.

In these days it is more and more difficult for the conscientious operator to reconcile himself to the death of a patient by sepsis after operation, it ought almost never to occur.

Experience has shown that those who die ought to have been drained, and that in long series of cases those who are drained die less frequently than those who are not.

The result of the compromise between the reasons for and against drainage has been the establishment of the following indications for drainage:

(1) The presence of freshly-separated adhesions, or of voluminous pedicles, or of rents or incisions in the pelvic peritoneum which have required many stitches, in fact, of any condition which may probably lead to hæmorrhage or to oozing of bloody fluid.

(2) The fact that pus, or urine, or fæcal matter, or the contents of cysts or much blood has escaped into the abdominal cavity such a circumstance should always be followed by free irrigation with pure hot water and the use of drainage.

(3) The perforation or incision of the intestine or bladder during operation, or a sloughy condition which makes it probable that perforation will occur.

Even when an opening into these

viscera found or made during operation is carefully sutured, experience shows that patients often recover with a fæcal or, as the case may be, a urinary fistula, who would presumably have died without drainage. Such fistulæ heal eventually under proper treatment.

(4) The presence of masses of exudates, or of stiff walls of cavities from which diseased organs have been enucleated, which do not permit the intestines to snugly fill the pelvis and which would offer a cavity where fluid could accumulate.

(5) Almost any condition, such as shock or weakness, which has required very rapid termination of a difficult operation, in which case the abdomen will usually be full of hot water.

There are no special contraindications to drainage; the general considerations mentioned above prevent its use where it is not needed; but practically, those operators who use the drainage-tube learn to trust in it, and when there is any doubt they drain.

The advantages are real, immediate, and indispensable. The disadvantages are mostly theoretical, remote, and preventable.

It will thus be seen that drainage used after irrigation is particularly associated with modern pelvic surgery. It is seldom necessary after ordinary ovariectomy, but is indispensable in many cases of laparotomy for salpingitis, ectopic gestation, evacuation of abscesses, intraligamentary cysts, etc.

It is especially advantageous for the man who operates with few and ill-trained assistants, without the aid of the elaborate preparations of a thoroughly organized hospital.

It is useful in the weak and in those

where we have to fear that the stomach and bowels will not behave well, and that thus the peritoneum will fail to absorb any fluid which may be effused.

In regard to the technique of drainage, of course there are differences in the practice of various operators, but there is substantial unanimity concerning the chief points to be observed.

In the first place, a straight tube should be used, because it is easier to clean, and sometimes it is important to turn it on its axis without removing it. It is also far easier to introduce and to remove a strand of absorbent cotton or gauze through a straight tube than through a curved one, and often it is very desirable to turn the cotton-holding probe on its axis in order to wipe out the tube or to remove small clots of blood from the space of Douglas. Tubes which have the same curvature everywhere, like those used by Dr. Sanger, may sometimes be valuable, but those which have a curve only at the lower end are objectionable in every respect. The tube, being straight, should be well annealed, open at the lower extremity, and provided with a flange at or near the top. The lower two inches should be perforated with fine apertures, so small that the omentum or intestine cannot become entangled therein and yet large enough to permit of the free passage of blood or secretions. The tube should be perfectly smooth inside and out. It seems hardly necessary to specify these attributes of a good drainage-tube; but yet it is very difficult to find one in the shops which fulfils all these conditions. A collection of unsuitable tubes is

here shown, as well as those which I am accustomed to use made after the model of those employed by Bantock. The latter are two-fifths of an inch in diameter, and have a calibre just large enough to admit a probe wrapped with cotton, or a small rubber tube. They are in four lengths, —five, six, seven, and eight inches respectively.

Operations which require drainage usually demand irrigation of the abdominal cavity, and for this pure hot water is to be used, preferably distilled water or that which has been boiled and strained. No antiseptic should be added to the water (although some think that it is well to add common salt, 0.6 per cent. or sixteen grains to the quart), which is to be poured rapidly into the abdominal cavity by means of a funnel and rubber tube, with an end piece of glass or hard rubber having openings sufficiently large to permit of a free flow of water.

Irrigation is to be continued until the fluid returned is clear or nearly so, making sure that opportunity is given for all clots to escape; then without attempting to remove the water from the abdomen, the tube is to be carried to the bottom of the space of Douglas, and sometimes a second tube or a packing of gauze is required to drain some particular pocket or cavity with stiff walls. The abdominal wound is closed around the tube, allowing the latter to project through that part of the wound where it lies most easily. Excess of fluid may then be removed through a small rubber tube inserted in the glass drain. A piece of thin rubber sheeting, or "dam," is then stretched over the upper end of the

tube, which projects through a small hole in the middle of the sheet. This prevents any soiling of the wound by fluids which escape through the tube.

The subsequent care of the drain may vary according to the system and the ingenuity of each operator, but any method, to be efficient, must insure that the space of Douglas be kept dry, and that the drain be kept clean, and that no infection be carried into the peritoneal cavity. My own method is as follows: When the patient is in bed, a piece of rubber tubing about eighteen inches long, with a lateral opening close to the lower end, is introduced into the glass drain until it reaches the bottom of the latter. All fluid which can be extracted by the aid of a syringe is then removed, the rubber tube remaining in place. Everything about the dressings being now made dry and clean; the upper end of the drain is covered with clean, crumpled gauze, in which is enfolded the piece of rubber tube which runs down through the glass drain. The nurse has instructions to suck the outer end of this rubber tube, without disturbing its position, by means of a small syringe, every ten minutes at first, and afterwards every quarter or half an hour, according to the amount of fluid which is obtained. In this way a large amount of bloody liquid is often obtained, while the patient is not disturbed in the least, and serious hæmorrhage is at once detected.

After a lapse of a period varying from one to eight or ten hours, the rubber tube is removed and glass drain is carefully dried by means of a wire wrapped with absorbent cotton, or iodoform gauze until no more fluid is absorbed, then a rope of loosely-

twisted absorbent cotton or a strip of iodoform gauze an inch wide is pushed down to the bottom of the drain by means of the wire. This usually remains in place for two hours, when the same process is repeated, and the intervals are gradually increased to three or more hours, as the secretion diminishes. In most cases, if all goes well, on the second day the secretion will be scanty and straw-colored, and when this favorable change is noticed, and not sooner, it is time to withdraw the glass tube. It is not best to withdraw the drain earlier than thirty-six hours after the operation, since the secretion sometimes diminishes after twelve hours, and then becomes quite free again during the period of reaction. I find it convenient to introduce a piece of clean rubber tube through the glass drain and to withdraw the latter slipping it up over the former, so that when the glass is out the rubber tube is left in its track. A strip of iodoform gauze may be used in the same way. Whichever is used is then pulled up an inch or two, cut off above the dressings and fastened with a safety-pin. It is shortened half an inch morning, noon, and evening, until it is thus all removed. If everything has been kept clean, there is no trouble about the healing of the wound and no tendency to formation of fistula.

Septic infection of the wound may be avoided by clean fingers, clean cotton or gauze, and clean wire. As a matter of fact, wounds do very well, and tubes do not become infected if ordinary absorbent cotton is taken from a roll as it comes from the manufacturer, and if fingers and instruments are well scrubbed with soap

and water. The scrupulous surgeon will prefer, however, to sterilize his cotton and gauze by steaming or baking them and will dip his hands in sublimate solution after washing them. The main thing, however, is to prevent the accumulation of fluid in the peritoneal cavity; if the drain is so placed and so cared for that this is accomplished, the patient will recover, even after desperate and gruesome operations. On the other hand, if drainage is not used and the fluid accumulates, and for any reason the peritoneum fails to absorb it, the patient will surely die in spite of all the refinements of antiseptics.

It remains to consider certain cases in which drainage with the glass tube is not sufficient. These are those cases in which there is free oozing from some points deep in the pelvis, such as the bed of a pyosalpinx, an extra-uterine pregnancy, or a tumor of the broad ligament, and in which the condition of the patient is such that a further loss of blood would be disastrous, and a prolongation of the operation would be unwarrantable. There are also certain cases where it is desirable to prevent the intestines from falling into a cavity, which is wholly or in part lined with a suppurating membrane, or where a perforation of the bladder or intestine has been found or made, so that a fistula may reasonably be expected. In these cases packing with iodoform gauze is of the greatest service, and the best way of employing this is certainly by the method of Miculicz. This is applied in the following manner: The centre of a large square of iodoform gauze, from two to three feet on the side, is seized with the clamp or sponge-holder and pushed to the very

bottom of the cavity to be drained. The fingers of the right hand are now carried inside of the sack thus formed, and here expanded so that the gauze is spread over every bleeding point and pushed into any suspicious cavity. Strips of iodoform gauze, three inches wide and a yard long, are now pushed down over the fingers, using a clamp or other smooth instruments until the cavity is filled. This usually requires from three to five such strips. I usually employ a glass drainage-tube reaching to the bottom of the pelvis behind the gauze packing, in order that the irrigation fluid and bloody oozing may be rapidly withdrawn during the first twelve hours after the operation, after which the glass tube can be taken out. Nevertheless, this use of a glass drain is not customary, as the gauze packing will remove a large amount of fluid in the pelvis by capillary attraction. It is, therefore, usually covered with a mass of crumpled sterilized gauze to absorb this fluid. I think it is better, however, to wrap a piece of rubber dam around that part of the gauze packing which is external to the wound, lengthening it if necessary by pinning to it a piece of moist gauze, so that the whole can be carried between the legs of the patient, or at one side, into a mug which will receive the drainage fluid. This modification makes it much easier to keep the bandages and dressings dry and clean, and facilitates drainage by adding the principle of the siphon to that of capillary attraction.

The strips of gauze should be removed from the sac after from twenty-four to forty-eight hours, the sac itself on the fourth or fifth day. It is not well to try to remove it by means of

a string attached to the centre, as recommended by Miculicz. At any rate, it cannot be done readily when the neck of the sac is so small as I make it. On the fourth or fifth day, however, by gently unfolding or pulling on the edges of the sac, first at one point and then at another, the place will soon be found where it can be drawn out, and starting from this point the whole can be gently removed, the cavity syringed with peroxide of hydrogen, and then a fresh strip of gauze put into it. It is astonishing how rapidly the cavity closes and the abdominal wound unites. I have used this method of packing in a large number of difficult and serious cases, and I have been so thoroughly satisfied with it that I have no hesitation in employing it.

I shall say little in regard to draining the abdominal cavity through the vagina. There is no doubt but that it is a useful procedure in vaginal hysterectomy, and sometimes in total extirpation of the uterus, but, as a rule,

where the abdomen has been opened from above, I prefer to use drainage through the abdominal wound, because the vaginal drainage is neither so efficient nor so convenient, nor yet are we so certain of draining the pouch of Douglas, while we have to depend on capillary attraction to raise the fluid to the level of the perineum. It is moreover difficult to keep the capillary drain clean and away from infection when it protrudes from the vagina.

I could say much more about drainage, but it is not necessary, for it is impossible in a written communication to explain all the little points on which a successful use of it depends. It is a practical refinement of the art of surgery, of the highest order of skill, and of the greatest possible importance, and it will serve well those who are content to study its details with care and thoroughness. Its advantages are evident to those who know how to use it best. Of its disadvantages the contrary may be said.

Sudden Death of Women from Placenta Prævia, with Remarks on Treatment.

BY CHARLES GREENE CUMSTON, B.M.S., M.D.

THE most important cause of death is the profound anæmia created by repeated hæmorrhages, which are the characteristic symptoms of this abnormal condition. It is in reality from a sudden syncope that the patients most often die. The prognosis of placenta prævia is consequently

subordinated to the abundance and number of the hæmorrhages, but, at the same time, the personal resistance of the patient and her former condition of health must also be considered. Central insertion is particularly bad, because the inevitable detachment of several cotyledons exposes the

subject to more frequent and serious losses of blood. When anæmia is not advanced enough to produce by itself a mortal syncope, the extreme weakness caused by it takes away all resistance from the patient, and under these circumstances it is quite possible for the slightest loss of blood to bring about a fatal result. Thus, the simple shock of labor may suffice to produce death; the sudden depletion of the uterus can also bring about a syncope. Sudden movements, change of position, may be followed by sudden death. Professor Tarnier saw a woman die suddenly, after labor, from simply lifting her from one bed to another, the patient being exhausted from hæmorrhages due to a placenta prævia. There is one other cause which, perhaps, can be put forward as determining syncope,—namely, chloroform. It is with good reason that many writers have proclaimed the harmlessness of this drug in women in labor, for it may be said to be perfectly safe and enjoys a real tolerance in this condition. But it is not the case when the patient is in profound anæmia, for under these circumstances chloroform may produce a syncope. Dr. Maygrier, in his "*Leçons de clinique Obstetricale*," cites four cases of sudden death from placenta prævia, and believes that in all cases where the patient is weakened by more or less abundant hæmorrhages, this agent must not be employed, even when the patient seems to be in a relatively good condition. In women debilitated by loss of blood, the uterine contractions are usually quite weak; the brain, at each effort, is not so abundantly irrigated with blood, and they rather incline to increase the already existing anæmia of

the organ. It may consequently produce syncope. Is it possible to remove patients from these perils? In order to reply to this question, two cases must be distinguished, especially when the physician is warned from the *début* of the accidents or when he is summoned to repeated hæmorrhages. In the first case, it is not doubtful but that the treatment can ward off a serious anæmia. When the prognosis of placenta prævia is made, and the physician is called to the first hæmorrhage, his chief preoccupation should be to prevent the return of this accident, a thing that is nearly certain, and instead of retiring in false security he should be ready to interfere as soon as it reappears. In order to do this, a tamponade should be made at the very first trace of blood, which, if done with proper antisepsis, can in no way produce symptoms of infection.

Tamponning is, it is true, often badly done. The physician simply introduces a few balls of absorbent cotton or gauze into the vagina, which is more than insufficient. The only way to stop a hæmorrhage is to pack the vagina so that it is completely filled up to the vulva with tampons, and in introducing these, they should be put in such quantity that the cavity of the vagina is transversely dilated so that it reaches the walls of the pelvis. The tampons may be made of gauze or absorbent cotton. These substances should be well disinfected before use; the best way being, when a sterilizer is not at hand, to boil them in a solution of bichloride of mercury at 1 to 100 for fifteen minutes. The writer prefers, however, to make his tampons in the following way. He uses a *good ab-*

sorbent cotton, which is put into a Schimmelbusch sterilizer and boiled for ten minutes; after which it is drained in a *sterilized*, perforated steel box for twenty-four hours.

Then after sterilizing the hands as for a surgical operation, the cotton is made up into tampons, and these are placed in *sterilized glass jars*, large enough to contain forty medium-sized tampons. When in the jar, a sufficient quantity of the following solution is poured over them and the glass closed:

R	Iodol,	10.0.
	Alcoholis absolut.,	q.s. ad sol. perfect.
	Glycerin pur.,	200.0.

Tampons which are saturated with this iodol-glycerin, made according to my formula, will remain in the vagina for several days without giving any odor when withdrawn. Before introducing the tampons they are thinly covered with 3 per cent. carbolyzed vaseline, forming, when they are introduced, a sort of cement, which cannot be penetrated by blood. The tampons should have the form and size of a large English walnut, fifteen or twenty to be inserted at the bottom of the vagina. They should have silk thread attached to facilitate their removal, the others do not need the silk.

Every accoucheur should be provided with a few jars of sterilized and prepared tampons ready for use. Tamponning is sometimes painful and, still more, may produce dysuria and rectal tenesmus; but these are only slight evils when compared to the advantages. It stops the hæmorrhage and, what is more, produces by its presence uterine contractions which hasten labor. In reality, no serious

accident has been put to the cause of a well-executed and aseptic tamponnade. According to Dr. Maygrier, it is the best and most efficacious treatment that is employed in pregnancy complicated with placenta prævia.

In the second eventuality, which is by all means the most serious and unfortunately the most frequent, successive and abundant hæmorrhages take place and the patient falls into profound anæmia. Two cases may present themselves; either the woman is not in labor or labor has commenced and is more or less advanced. In the first case there are two indications to fulfil: the first is to stop the loss of even another drop of blood, for another hæmorrhage, no matter how slight, might bring about immediate death.

To do this, the membranes will be left intact, for a sudden rushing away of the amniotic liquid might cause a syncope; and at the least appearance of blood an immediate tamponnade is done. The second indication is to build up the organism by all possible means. The patient should be surrounded by heat, alcohol given in large doses; she should remain perfectly quiet with the head low; time is thus gained, and the patient receives a sufficient dose of strength to support the shock of labor. If the woman is in labor, the above treatment is indicated as long as dilatation is not complete, and a vaginal tamponnade is practised and left until complete dilatation. As soon as dilatation is sufficient for the termination of labor, the membranes should be ruptured, allowing the liquid to flow slowly, by holding the hand over the vulva. When the necessary operation is performed, be it the forceps, version,

breech extraction, or embryotomy, it must be done slowly and gently, without taking the life of the fœtus into consideration, which is most precarious under these conditions. The emptying of the uterus too quickly, and especially avoidance of a sudden compression, which could cause sudden death in so weak an organism, must be above all watched. During labor the patient should be kept warm and receive subcutaneous injections of ether. Lastly, once the child delivered, attention must be paid to the

placenta; the patient must be kept completely quiet, and the physician must be on his guard for hæmorrhage, which is, however, uncommon at this stage. If the placenta does not soon come away, or if blood, no matter how little, appears, artificial delivery, carried out in the same prudent and gentle manner as with the child, should be performed. After labor, all change of bed or transportation is to be avoided, and the patient should be kept warm and strengthened until she is out of danger.

Tuberculosis of the Rectum.

BY PROFESSOR TILLAUX.

A clinical lecture delivered at the Hôpital de la Charité, reported by C. G. Cumston, M.D.

GENTLEMEN,—I am going to relate to you an interesting case, and delicate in a triple point of view as to the diagnosis, pathology, and treatment. The young girl, who is the patient, is 18 years of age; her father is living; her mother died of tuberculosis at 29 years; she has one sister, who enjoys good health. The patient was in good health, excepting an inguinal hernia at the age of 11, but this does not give her trouble. She has had habitual constipation for the last six years, but it is at about the age of 15 that the present symptoms appear to have developed; at that time a discharge of pus and blood commenced to be discharged from the rectum.

This young girl commenced sexual intercourse at this age, but the discharge of blood and pus preceded the first intercourse; this is without doubt,

and I questioned her lengthily this morning concerning this fact. I could find no syphilitic symptoms.

After a palliative treatment at home, she entered the Hôpital Saint Antoine, where she was operated on, on October 28, 1890, and although the patient cannot inform me exactly as to the nature of this operation, it is probable that it was for an anal fistula. She left the hospital in February, 1891, still suffering, and not cured. She entered the hospital four months later, and it appears that the visiting surgeon made an inoculation in the abdominal wall, which was followed by a vast abscess; the anus was also dilated. She then left the Hôpital Saint Antoine, and nine months later she entered the service of Professor Déprès, leaving it still suffering, and entered my service on February 1,

1894. The actual condition is as follows: exteriorly only the cicatrix of the operation done at Saint Antoine is to be seen (probably an operated fistula). But as soon as a digital examination per rectum is made, it is at once evident that the mucous membrane is indurated, as if granular, and at five or six centimetres above a circular stricture is found, not very tight, it is true, since it admits the end of my index finger, but it probably was more marked before the dilatation by sounds that was practised. I thought that I felt other strictures above this one, real foci of proliferant proctitis, pushing back, so to speak, the upper limits of the stricture. The exploration was very painful, so I did not persist in it. But on examining the vulva, and it was in exploring this that I made this discovery, for the patient did not call our attention to the fact, a hole situated at the lower part of the vagina, on its posterior wall, and extending through to the rectum, was found; there consequently exists a *large* recto-vulvar fistula, or, to be more exact, *ano-vulvar*, the borders of which are of a violet color, detached, and if seized between the fingers they are found to be indurated. There exist, consequently, three lesions: first, a granular proctitis, extending quite high up, as was found to be the case when the patient was under chloroform; second, a stricture situated at about four centimetres above the anus; third, an ano-vulvar fistula having the characters that I have already described.

The physiological signs are most marked; she has pain in defecating; the stools are small, ribbon-shaped, and flat, and covered with mucus and pus; she is constipated, but what annoys

the patient the most is the glairy mucus of a purulent nature. The general condition is not much to boast of, for she suffers very much, but is not tuberculous or, at least, the lesions of this disease are not appreciable, although the patient says that she has spit blood. The exact diagnosis is most difficult to establish; it evidently is not an epithelioma of the rectum, which has other characters, and where the tumor is perfectly limited without any granulations surrounding it; the mucous membrane situated above and below a malignant neoplasm being absolutely free from infiltration. The *début* of the lesion dates perhaps much further back; the patient from infancy has been constipated,—could this be a congenital stricture? Now this last variety is characterized by a band, a ring, a diaphragm more or less developed, ordinarily not very thick, with perfect integrity of the mucus above and below; in congenital stricture the stricture is always single and no granulations exist. This can only be one thing,—namely, a venereal proctitis, and stricture, and, I understand by that, not only a tertiary syphilitic stricture, but one that is of gonorrhœal nature, which is also of venereal essence. Now, gentlemen, after matured consideration, I do not believe we are in face of this kind of rectal stricture. When examining the patient, I insisted on the point that the symptoms appear to have preceded sexual intercourse. Now, if this is not a venereal stricture, there only remains ano-rectal tuberculosis, which is perfectly in accordance with the symptoms that were furnished by rectal examination. The mother of the patient died of tuberculosis; one

of her uncles has just been operated for a fistula *in ano*, which is often of tubercular nature; and last year the patient spit blood. And how otherwise can we explain an ano-vulvar fistula, which is still growing every day and resembles so much a gumma? So that I believe that we have to do with a recto-anal fistula, the tubercles are ulcerated, whence the blood and pus, and, still more, there is a tuberculous infiltration of the mucous membrane. I hope that we can verify this diagnosis at the operation, which the patient desires greatly; consequently I am still much embarrassed about it. I am about to try extirpation of the entire mucous membrane of the lower part of the rectum with the scissors, through the peri-

neum and anus, but in order to accomplish this, the stricture must not be situated too high up, and this we will find out when the patient is under chloroform. But if it is too high up, I do not see exactly what is to be done. What I would like to do is to slide the mucous membrane down and suture the portion situated above the stricture to the skin. If this should fail, perhaps it would be well to make an artificial anus in the iliac region so as to be able to cauterize the tuberculous mucous membrane of the rectum.

Note.—Under anæsthesia, it was found that the stricture was situated very high up, and consequently could not be excised.—*La Tribune Médicale*, June 28, 1894.

The Operative Treatment of Uterine Fibroids.

BY ERNEST W. CUSHING, M.D.,

BOSTON, MASS.

OF all the advances in surgery, achieved during the last few years, none has been more surprising or more gratifying than the improvement in the methods and in the results of the operative treatment of fibro-myomata of the uterus, while at the same time the more accurate knowledge of the clinical history and morbid degenerations of the neoplasms, which has recently been obtained, has introduced entirely new views as to the indications which call for operation, and as to the dangers which are incurred by neglecting such growths until the life of the patient is actually endangered by their presence.

It is not very many years since, on the one hand, a uterine fibroid was regarded as a wholly benign growth, almost sure to cease increasing or to diminish at the menopause, while, on the other hand, the results in the few cases subjected to operation were so unsatisfactory that there was but little encouragement for surgeons to persevere in attempting to remove these growths, thus Mathews Duncan could say, "Whoever heard of any one dying of a fibroid tumor?" while physicians everywhere, sharing his views, created a body of professional sentiment which has come down to the present day, regarding such

growths as comparatively innocuous, and strongly discouraging all operative interference, even in extraordinarily severe cases, until the life of the patient was in imminent danger. On the other hand, as good operators as Sir Spencer Wells, men already distinguished in abdominal surgery and experienced in the removal of ovarian tumors, would entirely refuse to interfere with uterine fibroids, and if by chance one was disclosed on opening the abdomen for the removal of an ovarian tumor, far from proceeding with the removal of the growth they would close the abdomen and in confusion lament the error of their diagnosis.

As the natural consequence of these views and conditions hysterectomy was only performed as a last and desperate resort in patients who were sinking from hæmorrhage, or from exhaustion, incident to the growth or degeneration of the tumor. And it is little wonder that the mortality was high. The pioneer work in this operation was done in Massachusetts by those determined operators, Burnham¹ and Kimball, of Lowell. Burnham's operation was performed June 26, 1853, the patient being still alive in 1884, it is conceded that this was the first removal by abdominal section of the uterus and appendages for fibroid disease. Burnham operated fifteen times, with twelve deaths, a mortality of 80 per cent., while his mortality in 338 cases of abdominal section of all kinds including the hysterectomy was 25 per cent., that from 238 completed ovariectomies being 20 per cent.

By improvement of technique and

by the growth of institutions where large numbers of cases could be operated upon under improved conditions by trained surgeons, the mortality from hysterectomy was gradually reduced from 80 per cent. to 60 and 50, and, finally, to about 35 per cent., where it stood some ten years ago, at the beginning of the era of advances in abdominal surgery. Since then the reduction of mortality has gone on progressively; but it is of the utmost importance to remember that the improved results are not all due to the improvement of surgery, but are due to the fact that the operation is now performed before the patients are so reduced as to have thrown away most of their chances of recovery.

Nevertheless, grim and lamentable cases still occur too often where, either from timidity on the part of the patient, or from bad advice and mistaken ideas on the part of her medical adviser, the time for favorable operation has passed by. The chances of recovery have been cruelly thrown away by miserable delay, and worse than useless treatment, until the patient is delivered to the surgeon sinking under her burden, a subject for a hazardous and gruesome operation, and likely then to die, leaving grief to the friends, blame to the surgeon, and discredit to the profession.

We are passing through the same change in theory and practice in regard to fibroid tumors which has already been accomplished in regard to ovarian growths. With the gradual enlightenment of the profession, and of the public, it is now rare to find the formidable cases of huge neglected ovarian tumors which were formerly so frequently brought to surgeons for operation; no one will now maintain,

¹ A full report of Burnham's 338 cases was published by his grandson, Dr. H. P. Perkins, Jr., in the *ANNALS OF GYNÆCOLOGY*, May, 1888, Vol. 1, p. 339.

as was formerly done, that an ovarian cyst should not be removed until its presence actually threatens the life of the patient; instead of throwing away the chances of the patient by delay, by treatment, by repeated tapplings, all competent physicians now recommend removal of an ovarian cyst as soon as its presence is detected, with the result that the operation in these early cases has become practically free from mortality, it is approached with confidence, it is accomplished with facility, it is a grateful interlude between the serious acts of important abdominal surgery.

Now, in regard to uterine fibroids, a similar course of reasoning will apply, *mutatis mutandis*; like ovarian tumors they are apt to grow, and when of large size they are very likely to degenerate and to cause the death of the patient; unlike ovarian tumors, they are peculiarly apt to injure the health and exhaust the vitality of the patient by repeated and protracted hæmorrhage; they are liable to slough or to suppurate. In a considerable proportion of cases the myomatous uterus becomes affected with malignant disease. The tumor is liable to cause dangerous symptoms or fatal consequences by pressure on the ureters or on the intestine. If, therefore, there were any such certainty or probability of the continued growth of fibroid tumors that there is of the increase of ovarian tumors, the rules which are applicable to the latter class would at once govern our practice in regard to the former; the immediate removal of uterine fibroids as soon as discovered would be the rule. But here is precisely the difference between the two classes of tumors. Many women have fibroids which are small, which

do not grow, and which cause no symptoms. In many others the tumor slowly increases during the years of functional activity of the uterus, but ceases to grow or even diminishes after the menopause. It is therefore obviously not necessary to operate on every tumor of this kind, and the establishment of indications for surgical interference becomes in the highest degree a matter of individual judgment and experience, to be determined by the nature of each separate case; wherever there is a chance of difference of opinion it is safe to assume that doctors, like other people, will disagree; but the more opinions can be founded on sound pathological knowledge, and on the records of wide observation, and the more questions in dispute are illuminated by experience, and elucidated by discussion, the nearer shall we approach to a consensus of opinion, and to the establishment of definite rules of practice. In nothing is this more evident than in the treatment of fibroid tumors, and in no department of surgery is professional opinion crystallizing more rapidly into definite rules of procedure, based on accurate knowledge.

The latest aspects of this question are not as yet presented in the textbooks, but are earnestly discussed in medical societies and medical journals in this and in other countries. Particularly at the last three meetings of the American Gynæcological Society, and at the Pan-Am. and XI. Internat. Congresses, a great deal of attention was devoted to the subject of uterine fibroids; and while there are numerous individual differences of opinion, yet it is plain that those most interested in the subject, and whose opinion is based on the widest experience, have

modified their views greatly within the last few years, and are now approaching unanimity of opinion.

In the first place it is practically conceded that electricity is powerless to prevent the growth of fibroid tumors, and it has been abandoned by many very competent men, who, a few years ago, were adopting the new treatment with enthusiasm. It will in many cases arrest and control hæmorrhage, in many others it will allay pain and nervous symptoms, in not a few it will set up very serious suppuration, or cause peritonitis of various grades, leaving adhesions, which afterwards seriously complicate any operation which may become necessary.

It is substantially agreed that tumors, even of moderate size, require operation if they are growing, if they cause hæmorrhage, if they occasion pain or pressure symptoms, or if they are complicated by salpingitis. There is some difference of opinion as to the size which a tumor should have obtained to warrant removal. One would operate on growths as large as the fist, another on nothing smaller than a cocoanut, but none would countenance waiting until the tumor was larger than the adult head, as was so frequently done only a few years ago, and as is still advised by some conservative but ill-informed practitioners. It is agreed that the dangers of operation increase in direct proportion to the size of the tumor, the age of the patient, the reduction of vitality caused by repeated hæmorrhage, and disturbance of nutrition; that the fatal cases are usually the neglected ones; that the difficulties of operation and consequent dangers are enormously increased by the presence of adhesions, by the compli-

cations of salpingitis, of pyosalpinx, or of cystic or purulent degeneration of the ovaries; that incarcerated tumors may press on the ureters and bladder while large ones drag these organs out of place, often leading to serious and fatal disease of the uterus; that a very large proportion of tumors commence to grow or continue to grow after the menopause; that even a larger proportion of those which, having arrived at a large size at the time of the menopause, then cease to grow do not diminish, but degenerate, becoming soft and decomposed and by sloughing or septic absorption lead to the death of the patient or to an operation *in extremis*. It is agreed that an operation for removal of an ordinary fibroid of the uterus by a competent surgeon upon a healthy patient is not much more dangerous, if at all, than is the removal of an ovarian cyst, and that all improvements of technique tend to reduce the danger of operative interference in uterine tumors to such an extent that they are more and more coming under the rules which are applied to ovarian tumors.

Another consideration is worthy of mention here,—namely, that the diagnosis of pelvic growths is frequently so obscure, and the examinations on which it is based are even more frequently so insufficient that growths are often called fibroids which really belong to other and more dangerous categories. I have seen not a few cases where supposed fibroids of the uterus were really cases of cancer of the ovary, cancer of the uterus, solid ovarian tumor, pyosalpinx with induration of the pelvic roof, impacted dermoid cyst, etc. Other surgeons have had similar ex-

periences. The chances of operation have been lost or the results of surgical interference unduly jeopardized in these cases by well-meant delay, based on the supposition that the growth was a fibroid of the uterus, and therefore required no operation.

Having now noticed at some length the indications for operation in fibroids of the uterus, we may consider the different operations proposed for their relief or their removal. Those which have received any extended trial are,—

(1) Removal of the uterine appendages (Tait).

(2) Tying uterine arteries from vagina (Franklin Martin).

(3) Myomectomy, or removal of the tumor, leaving the uterus intact.

(4) Removal of submucous fibroids through the os uteri and vagina.

(5) Vaginal hysterectomy.

(6) Supravaginal hysterectomy.

(a) Stump fixed in abdominal wound.

(b) Stump fixed just below abdominal wound but outside of abdominal cavity (Kelly).

(c) Stump turned forward into vagina (Byford).

(d) Stump intraperitoneal (Schroeder); modified by Martin, Zweifel, etc.

(e) Stump extra-intraperitoneal, the arteries being tied in broad ligament and the stump covered by peritoneum (Eastman, Chrobak, Dudley, Goffe, Baer).

(7) Total extirpation, a combined operation, tumor from above, and cervix from below, with clamps below (M. D. Jones); with ligatures (A. Martin, Boldt).

Total abdominal extirpation (A. Martin, L. Stimson, Krug, Polk, and others).

The space at my disposal here will not suffice for the discussion of the technique of these various forms of operation, and probably such a treatment of the subject would not be of general interest. As may naturally be supposed, opinions are somewhat divided as to the choice of methods and as to certain details of operations and procedures which, on the whole, are essentially similar. Nevertheless, I believe it will be of interest to point out the indications which would govern me in selecting one method or another, omitting here historical details and questions as to priority or invention. And (1) as to the removal of the uterine appendages. This operation, introduced by Hegar and Tait, and resting very largely on the authority of these names and especially on the strong recommendation of Tait, gives excellent results in the case of small tumors where the principal difficulty is monthly hæmorrhage. Few operators, however, at present, are willing to trust to it where the tumors are large and rapidly growing. It is hard to see how the artificial induction of the menopause will do more than the natural change of life, and this, as stated above, notoriously does not control the continued growth of tumors which are large and show a tendency to increase rapidly. Even Tait does not claim that it is of any use in cases of solitary soft myoma or in fibrocystic tumors. In the light of facts recently placed in evidence, Tait's statistics have far less weight with the surgical world than was the case a year or two ago. The chief objections to this method, when the tumor is large, are, first, the possibility of degeneration of the growth, and,

secondly, the difficulty of employing drainage; my own experience with this method has been very satisfactory. I have used it a good many times for small tumors, but only once for one larger than a cocoanut, which was firmly bound in the pelvis. This case died, and I have always been sorry that I did not perform a hysterectomy, inasmuch as I could not use drainage when the tumor was in the pelvis; in all the other cases menstruation ceased entirely and the growth diminished or gave no further trouble. Other surgeons, however, report cases where the tumors continue to grow in spite of this operation, necessitating subsequent hysterectomy. The chief indication for the choice of this operation is the fact that the tumor is growing in the fold of the broad ligament, leaving the appendages readily accessible.

(2) As for tying the uterine arteries from the vagina, hoping thereby to check the growth of the tumor, this is an operation recently suggested by Martin, of Chicago, but I have no personal experience of it. As the procedure is easy and safe, it seems not unphilosophical to try it in cases where the tumor is not so large that there would be danger of its degenerating or sloughing from the sudden cutting off of most of its blood-supply.

(3) Myomectomy, or removal of the tumor, leaving the uterus intact, may be a very simple or a formidable operation, according to whether the growth is pediculated or is embedded in the wall of the uterus and enclosed by a capsule consisting of uterine tissues. In the first case, it is a safe and quick operation to constrict a pedicle and fasten it with pins in the angle of the abdominal wound. It is not so easy

to treat the pedicle intraperitoneally as is the case in ovarian tumors, if the growth is cut away, the stump of the pedicle retracts, the vessels are hard to isolate and secure, the wound in the uterus gapes, and stitches used to close it are apt to bleed; the best method is to reflect the peritoneum from the pedicle commencing at the lower part of the tumor, then to sew through the pedicle the shoemaker's stitch of catgut before cutting it, tightening and tying the ligature as the tumor is cut away, and covering the stump with reflected peritoneum.

The removal of large myomatous nodules from the uterus has been principally practised and recommended by Martin, of Berlin, and is fully described in his work. It is not often that suitable cases occur for this operation, since usually the large nodule is accompanied by smaller ones, and where it does not seem that the patient will be cured by the removal of uterine appendages, most surgeons prefer to perform hysterectomy rather than to make and then close a considerable cavity in tissues as retractile and vascular as are those of the uterus; the singular celerity and dexterity of Martin enables him to obtain results which are satisfactory, while those less gifted would not succeed as well.

(4) I shall say little concerning the removal of submucous fibroids through the os uteri. There is little new in this question except that the *écraseur* and the wire-loop have fallen into innocuous desuetude, being replaced by simpler and more surgical methods of cutting, tying, and clamping the pedicle, if there is any. While sublimate irrigation and packing with iodoform gauze have diminished the dangers of sepsis from cavities left in the uterine

wall by the enucleation of submucous nodules, the difficult and hazardous operations which were formerly performed for the removal of large submucous growths have mostly been supplanted by hysterectomy. My experience would lead me to believe, however, that where a fibroid tumor of the uterus in the abdomen is complicated by the presence of a sloughing fibrous polyp, which has been extruded from the uterus, it is the safest to remove the polyp first by vaginal operation, leaving the hysterectomy to be performed at a later date when the cavity of the uterus is free from infection.

(5) Vaginal hysterectomy offers an easy and safe way of treating cases where the uterus is of moderate size, but where there is much hæmorrhage which is not easily relieved by curetting. It may also become an operation of necessity when in attempting to remove a submucous growth the uterus is perforated. Vaginal hysterectomy may fairly be considered as a rival of the removal of the appendages, as in suitable cases it is just as easy, is fully as safe, and because the uterus is of no use after the removal of the appendages, but may be very annoying to the patient, since it is heavy and is apt to become retroverted.

(6) A discussion of the various methods and modifications of supravaginal hysterectomy would alone form a voluminous paper. Of the two great varieties into which it is divided, the extraperitoneal treatment of the stump by fixing it in the angle of the abdominal wound has been more popular, and on the whole has given the best results of any method devised. Keith, Bantock, Tait, in England, and in this country

Price and his followers use a wire loop to constrict the pedicle, which is tightened by a small *écraseur* or *serre-nœud*. The continental operators and some in this country prefer the use of an india-rubber constrictor made of an ordinary piece of tubing, and if this is properly used, it is, in my judgment, far superior to the wire loop. The principal point to be observed is that it should pass twice around the pedicle above one pin and below the other. In this way it can be made to lie on the skin instead of being buried in the wound. If the pedicle is properly made it is slender. By exposure to the air it becomes entirely dry, does not slough nor smell badly, and when properly adjusted the dressings need not be touched at all until about the tenth day, when the constrictor and the stump are removed together. The other points to be observed are infinite care in cleansing the vesico-uterine fold of peritoneum, the accurate coaptation of the abdominal peritoneum around the stump and below the constrictor, and the use of the glass drainage-tube in all complicated cases. The tube should be separated from the stump by two or three stitches,—that is, by an interval of about three-quarters of an inch, and can be removed as usual on the second day without interfering at all with the stump. With these precautions, the objections to this treatment which have been the principal cause of the introduction of other methods are not well founded. There is no need of having a bulky pedicle or a sloughing stump, or a large opening predisposing to hernia. Contrary to the general opinion on the subject, it requires a higher degree of real surgical skill, care, and perfection of tech-

nique to treat the pedicle in this way properly than to remove the uterus entirely, but the saving of time, of shock, of hæmorrhage, and exposure of the intestines which can be obtained by this method must weigh strongly in its favor as against the more recent methods of operation which have lately come in fashion, and which are considered more ideal. The method has served me well in all sorts of difficult cases, in big tumors, in adherent tumors, and tumors complicated by pyosalpinx, and even where there was fistulous perforation of the intestine, and I know that in feeling that it should not be abandoned lightly in favor of other methods, I have the full support of Bantock, of Price, and of many other operators, whose excellent results entitle their opinions to the utmost consideration.

In spite of the good results obtained by the extraperitoneal method of treating the stump, some operators have always insisted that this was not the best procedure that could be devised, but that, like the corresponding treatment of the pedicle in ovariectomy, it was merely a temporary method and a halting-place in the march of progress towards an ideal method. First Schroeder and then Martin, of Berlin, were the great maintainers of this theory, and their method is well known, consisting in making the stump with an anterior and posterior flap which were brought together by silk or catgut sutures. Unfortunately, owing to the treacherous nature of uterine tissue, the stumps would slough if tied too tightly, while, if tied less firmly, they would ooze or bleed, so that the results would not compare with less ideal but more practical methods. Zweifel has now so modi-

fied this operation by an inlocking stitch of silk in the broad ligament and of catgut across the cervix that he has obtained admirable results, while Martin has abandoned it in favor of total abdominal extirpation.

The intraperitoneal method of Schroeder has, however, also been modified in this country in such a manner that the uterine arteries are tied in the broad ligament outside but near the uterus, when the cervix is cut away low down, and is then either dilated, burned, and drained after the method of Eastman, which has been followed by Chrobak and others, on the continent, or it is simply left untouched according to the method of Baer; in either case, the peritoneum is united above the stump. The only difficulty with this operation is that there is a tendency to suppuration below the peritoneum, and if much of the stump is left it is very apt to slough, owing to the entire deprivation of the part. This not unnaturally led to the conclusion that where the uterine arteries were sewed and securely ligated as to make the stump liable to slough, it was best to remove it *in toto*, and this method has been adopted with great enthusiasm by Martin, in Germany, and by L. Stimson, Krug, Polk, Boldt, Edebohl, and others in this country. As one step in arriving at this operation the body of the uterus was removed from above and the cervix from below, as in vaginal hysterectomy; but with the introduction of the Trendelenburg posture it is so easy to remove the whole from above that it is now usually done in that way. Martin attaches the vagina to the peritoneum all around with catgut sutures, the ends of all of which are brought out

through the vagina. Stimson and Polk use simply four sutures, one each in front and behind and one on each side, the ends of these are brought out from the vagina, and the space between is occupied with a packing of iodoform gauze. Polk and Mann strongly recommend the additional use of a glass drainage-tube in the abdominal wound. Other operators close the vagina with catgut, and unite the peritoneum above it with a sero-serous continuous catgut suture. Many consider a glass drainage-tube desirable in all these cases, although not all consider it essential.

This then at last would seem to be the ideal operation for the removal of fibroids, the only objections being time required and the resultant shock. The abdomen is widely open for from one to two hours, according to the dexterity of the operator and the character of the case; this is a very serious consideration, and, without desiring to deprecate the march of progress towards the ideal, I will say that this operation is not one for beginners, but for dexterous, experienced, and skilled surgeons.

The conclusions of my own experience, briefly summed up, are as follows:

(1) That electricity is useless and dangerous and has no place in the armamentarium of the surgeon.

(2) That no method will compare with that of extraperitoneal treatment of the stump in favorable cases,—that is where the abdominal walls are not too thick and the tumor can be lifted out so that a constrictor can be applied around the whole pedicle, including the uterine appendages; that the advantages of this method lie in its rapidity, in the short time during

which the abdomen is open, in the entire protection of the intestines from exposure and from handling, and in the absence of shock; that with proper care there need be no sloughing of the stump and little or no supuration of the wound. (I show here two stumps each removed on the tenth day with the rubber ligature still in position, they are perfectly dry, hard, and inoffensive.) This, then, for me is the operation of election for the present, especially in private practice and in all cases where the patient is not strong and is ill-prepared to withstand the shock of the longer operation required by other methods of treatment of the stump.

(3) For the intra-extraperitoneal treatment I should always, in future, leave as little of the cervix as possible, dilate it, burn it, and drain it. This method is applicable to cases in which it is difficult to apply the former one, owing to thickness of the abdominal walls, or rigidity of pelvic floor, or the presence of dense adhesions requiring drainage. I see little advantage to be gained from leaving any cervix; to avoid the great danger of sloughing of the stump, it must be amputated well below the level of the internal os after separation of the bladder from the cervix and ligation of the uterine arteries. When all this has been done there is no difficulty or loss of time in removing all the uterine tissues. Drainage should usually be employed both through the vagina by gauze and by a glass tube at the bottom of the pelvis, as there is pretty sure to be free oozing.

The fact remains, however, and must never be forgotten, that for either of these methods of operation,

by extra-intraperitoneal treatment, or by total abdominal extirpation, the operation is prolonged from one-half an hour to an hour; during this time the pelvis is exposed to the air and too much handling, considerable blood may be lost which runs in among the

intestines; there is an added shock from the large amount of ether consumed, and the whole burden of proof is, in my judgment, still on those who would use these operations in cases which are suitable for the extraperitoneal treatment.

Abdominal Surgery in the Country; Lives that Could Have Been Saved by Early Surgical Interference.¹

BY J. G. CARPENTER, M.D.,

STANFORD, KY.

THE post-mortem record often teaches more surgical pathology and diagnosis than the most brilliant and successful achievement in surgery. The duty of the medical attendant in cases demanding or about to require surgical interference: first make the diagnosis or approximate it, knowing there is a pathological lesion, growth, foreign body, or traumatism demanding immediate or remote surgery: also that surgery is done for a pathological condition, and not simply an exploratory measure; that the surgical tyro opens healthy bellies to see if there might be something in the abdomen and pelvis, and hoping and praying there may be, for he wants immortality in the belly if he misses it in heaven. Recognize the danger-signal early, before structural lesions have begun or advanced too far. Advise the family or patient, explain freely, send for the surgeon. If asepsis has not been carried out in

detail formerly, begin at once; empty the patient by free purgation and stomach-pump, if necessary; give liquid diet; give hot water and lye-soap bath; put patient at rest in bed; have the room, bed, furniture, and all linens made aseptic; have an abundance of aseptic water, both hot and cold, ready, and be prepared for the surgeon when he arrives. If operation is decided on for immediate treatment, no valuable time should be lost with preliminaries, the latter having been attended to by the medical attendant. As the surgeon is now placed in charge of patient, he carrying the major responsibility, it is right that the physician should confer the rights and prerogatives due a surgeon to him. A surgical nurse has certain surgical duties to perform. The medical attendant should see that the family or any friend does not interfere with the rights and orders, directions, etc., given to the nurse by the surgeon. Both physician, surgeon, and nurse have one common interest,—

¹ Read before the Central Kentucky Medical Society at Stanford, Ky., April 19, 1894.

viz., the saving of the patient's life and restoration to health. All envy, professional jealousies, and conduct must be avoided, neither physician nor surgeon trying to supplant the other. They both should be professional gentlemen and brethren, and should stand on the common platform of truth, honor, justice, and save the life of the patient, if possible. In the absence of the surgeon, the trained nurse must be in authority, not the family. Dr. Price has proved time and again that hospitals are not necessary for abdominal and gynaecological work, but a clean, wise, experienced surgeon, nurse, assistants, room, furniture, bedding, linens, and aseptic paraphernalia, before, during, and after operation are essential. Any single room or suite of rooms surgically fixed and equipped is a miniature hospital, however plain and simple they may be, whether in the country, town, village, or city.

CASE I.—Tubercular peritonitis. Case simulating an ovarian cystoma or a fibro-optic growth. Abdomen enormously distended; temperature subnormal, 97° F.; pulse 120; respiration 30; general anasarca; suppression of urine, almost complete seven days before operation; œdema of lungs; bronchial cough; moist crepitant and subcrepitant *râles*; complete prolapsus of womb, on account of intrapelvic and intra-abdominal distention and pressure; patient twenty-five miles in country box-house, three rooms; nurse sent four days before operation. The room, ceiling, walls, chairs, tables, bedstead, windows, doors scoured with hot water and lye-soap; bedding, patient's linens, towels clean; all utensils to be used scalded and placed in readiness; pa-

tient purged; given hot bath, and douche by nurse. Abdominal section: incision one and a half inches; eight gallons of fluid removed by measure; at least two wasted; abdomen thoroughly drained; tubercular lesions numerous; abdomen closed with three sutures; stitches removed fifth day; up to twelfth day after operation recovery continuous. Patient, in absence of nurse, gets out of bed, goes to the kitchen, drinks two glasses of buttermilk, eats a large, cold potato, and fried onion, and dies in twelve hours from cholera morbus. That the operation was a success, and all details of asepsis were complete, there is no doubt. Patient made a beautiful and continuous convalescence, until the indiscretion in eating. Not an unfavorable symptom had developed, and the case was a surgical success.

CASE II.—Boy, 12 years old; strumous diathesis; was thrown from a horse; suffered intense pains in right hypogastric region, corresponding to McBurney's point; gave a typical case of angioleucitis of right thigh for seven days, with malarial paroxysms; on sixth day had a chill, followed by high fever, remittent in type; on fourteenth day boy had another chill, fever continuing; temperature raised to 103½° F. and pulse 135 respectively; respiration 36; pain in the appendical region increasing, excruciating on touch; limbs flexed on thighs, thighs on abdomen; chloroform narcosis reveals a large, deep globular tumor at McBurney's point size of an orange. Abdominal section advised; parent's consent; patient given hot bath with lye-soap; for two weeks had been purged freely, and placed on liquid diet; abdominal section reveals a paracæcal abscess due to traumatism;

peritoneum protected by lymph; abscess cavity injected with hot water and drained; pyogenic membrane removed; wound dressed aseptically daily; tube removed on the fourth day. Recovery complete. To prevent hernia a binder was worn six months. When the peritoneal cavity is protected by walled lymph, it is unsurgical to tear the adhesions, plastic lymph wall, hunting for appendix, but let appendix alone; irrigate and drain; if disease in appendix recurs at some future time, remove it. The true surgeon operates to save life, and not to do ideal operations. Ideal surgery means high death-rate. At the dead-house is the place to do ideal surgery.

CASE III.—Wm. S., aged 10 years. Family history good; had a blow over cæcal region, but continued to work for several days; pain in cæcal region after a week became quite severe; right leg stiffened; flexed thigh flexed on abdomen. A continuous fever set in with morning remissions and evening exacerbations. "Patient treated three weeks for hip-joint disease and typhoid fever." Two months after injury the writer saw patient for one week; had been having two chills each day; temperature was $103\frac{1}{2}^{\circ}$ F.; pulse 150; respiration about 50, with symptoms of blood-poisoning. Patient was given aseptic bath, placed in a clean bed, the house being a log cabin. It being dark, the operation was done by the light from a log fire and a lamp without chimney. The boy's father and uncle acted as assistants. The writer anæsthetized the boy, opened the abdomen over McBurney's point, and evacuated a large abscess; irrigated with hot carbolized water; inserted two rubber drainage-

tubes, and dressed wound aseptically; irrigated and dressed wound daily for two weeks, when the second tube was removed. A protective bandage was worn for six months, preventive of hernia.

CASE IV.—*Gun-Shot Wound of Bladder*.—James H.; aged about 22 years. Family history good; received a gun-shot through right sacrosciatic foramen, involving the bladder. The ball entering the right wall of bladder at the trigone, about three-fourths of an inch from the floor, made its exit in the left wall at the floor of trigone, and lost in the body. Twenty hours after being wounded the writer saw the case. After injury patient had difficult urination. Catheterization revealed bloody urine, and an operation advised by Dr. Joseph B. Graham, the attending physician.

The operation of suprapubic cystotomy and cœliotomy was advised. The patient was made aseptic as well as bed and linens. The urine again drawn, bladder irrigated with warm boracic solution, distended with same, and a steel sound used as a guide in opening the bladder. The bladder was opened an inch and a half, and Nos. 8 and 12 catheters, perforated as drain-tubes (Nélaton's), introduced into the bladder, then into the right wound of entrance and left wound of exit, the external ends as well as walls of bladder stitched to the integument. A third catheter was introduced into the bladder through the penis and fastened for more complete drainage, and bladder washed through and through, irrigation every six hours with hot boracic solution. At the expiration of seventy-two hours peritonitis supervened, but was arrested with fifteen grains of

calomel and free use of salts. The patient did exceedingly well for nine days, when tetanus developed and terminated fatally. Post-mortem proved that the wound of entrance into bladder wall had healed. The wound of exit in left wall of bladder was unhealed, and through that urine had extravasated into the left side of pelvis, caused peritonitis and possibly tetanus, though patient complained of spinal concussion from reception of injury. While the writer believes he and the physicians in attendance did good surgery, it now appears that a median urethrotomy supplementing the suprapubic cystotomy would have given better drainage than with catheter fastened in the penis. This operation was done at a farm-house, patient given hot-water and lye-soap bath, dressed with clean linens, and operation done aseptically. Time of operation 10 P.M., and done by lamp-light. All praise is due Dr. Joseph B. Graham for the prominent rôle he acted in the operation, assisted by Dr. Peltus.

CASE V.—*Intestinal Obstruction; Three Cases.*—Mr. B., aged 55 years; farmer; family history good; had a diarrhœa, which was checked, and bowels never moved again. Patient was given opium freely to check bowels and ease pain by attendants, semi-narcotized, made easy with opium; operative symptoms obscured. The most powerful drastic cathartics and injections failed to act. Attendants thought patient was doing well, as he was sleeping much and resting easy,—“resting on this shore,” before he crossed the river into the “bright beyond.” The older men in consultation said, “Wait, be conservative; wait until to-morrow for symptoms, then we will operate.” The next day

and the next day still find the patient semi-narcotized, and doubtless dreaming of eternal bliss and visions of angels ascending and descending on Jacob’s ladder. To this patient to-morrow never came; the golden opportunity was lost. When patient was in *articulo mortis* an operation of opening abdomen was done heroically by attendants, and a volvulus of descending colon at sigmoid flexure found; mesentery elongated and colon and sigmoid gangrenous. Patient died on table. So mote it be. Alas! alas! man was born to die (but not prematurely).

CASE VI.—Strangulated hernia. Age of patient about 55 years. Strong, robust man. Family history good. Hernia supposed to have been reduced, but was strangulated in the sac.

Operation eight days after strangulation reveals plastic peritonitis; numerous adhesions; intestines discolored, dark purple; death on fifth day after operation.

Early diagnosis, early operation, asepsis, quick surgery, and taxis, not exceeding fifteen or thirty minutes, would have saved the life of patient, had the radical operation for cure of hernia been performed, and proper use of truss after operation would have made a complete recovery.

CASE VII.—Woman, aged 50 years. Health and family history good; had diarrhœa. After a copious operation bowels failed to move again; nausea, vomiting, abdominal pain the most constant symptoms; stercoraceous vomit once; patient battened with opium for fourteen days by three medical attendants: operation of cœliotomy advised by them on thirteenth day; patient’s pulse at this time was

100; temperature $97\frac{1}{2}^{\circ}$ F.; respiration 24. Surgically speaking an operation now seemed of no avail, but patient demanded and begged for the operation. A volvulus of ileum was found, with flexure and plastic peritonitis; adhesions numerous; these were separated, bowel straightened, and irrigation of hot water used. Patient died in seventy-two hours, either from peritonitis or opium-poisoning by attendants, as the medical attendants continued the use of opium, notwithstanding the surgeon had earnestly demanded salts and enema before he left the patient. The operator seeing patient only once.

Senn's hydrogen gas would, if properly used, have made the diagnosis of obstruction and its location. Early operation, before plastic peritonitis, strangulation, and gangrene occurred, would have saved life, by untwisting the volvulus, replacing it in normal position, and holding the bowel in place by shortening the mesentery. Case V could have been saved by resection and circular enterorrhaphy. Senn's modification of Jobert's operation, or Senn's lateral anastomosis with decalcified bone plate, or the Murphy button, would be the one thing needful when a slough or gangrene exist.

CASE VIII.—Post-mortem,—tubo-ovarian abscess; rupture; purulent peritonitis. Negro woman. Former history: has been having attacks of colic at divers times. Morphine and hot fomentations formerly gave relief, by her attendant; this being true at last attack she did not have a medical attendant, but used again the above treatment, and died in thirty-six hours, and county judge ordered a post-mortem, thinking the woman had

been poisoned. No digital or conjoined manipulation had ever been made by any doctor. The belly was full of pus, very offensive and acrid; the most marked and unique general peritonitis. The caput coli and ascending colon were gangrenous, and more or less disintegrated; the appendix vermiformis destroyed; numerous lymph bands stretched across the bowel at several points, constricting its lumen; the colon was perforated; the most extensive and intimate union by adhesion existed between the ascending colon and uterus and wall of right Fallopian tube; the latter had disintegrated into an immense abscess, whose walls were greatly thickened and condensed by inflammatory products; its cavity filled with pus. As the negro was a prostitute, it is safe to state there was first a gonorrhœa with endometrio-salpingitis, ending in occlusion of the fimbriated end of tube. The "colic," or exacerbations of pain, were leakage of tube, infection of peritoneum, local peritonitis. The peritoneal adhesions, effusions of lymph, organized bands teach the kindness of nature to do her best to stop leaks, strengthen the weak points, offer barriers of defence, until surgical interference is resorted to, and life saved by the surgeon. An early diagnosis, the aseptic hand, knife, irrigator, and drainage-tube would have saved a life now already lost. This case is typical of what is occurring in every village, town, and city, from week to week, month to month, and year in and year out, with physicians ignorant in the diagnosis, pathology, and treatment of intrapelvic diseases.

CASE IX.—Recurrent appendicitis. Attendant, Dr. ——. Diagnosis, colic.

Death in forty-eight hours. Post-mortem, purulent peritonitis; belly full of pus; appendix destroyed; ulcer at its former site; perforation of cæcum; early diagnosis; quick surgery; asepsis; short anæsthesia; and appendic-

ectomy would have saved the patient's life.

The attending physician batted the patient down with opium, obscured surgical symptoms, and lost a life.

SOCIETY PROCEEDINGS.

Transactions of the American Gynæcological Society.

RUPTURE OF THE UTERUS; PALLIATIVE *versus* SURGICAL TREATMENT.

Paper by Dr. C. M. Greene, of Boston. (See p. 658.)

THE PRESIDENT (Dr. Lusk) said, In cases of incomplete rupture there was no doubt but what asepsis and drainage would lead to a good many recoveries, especially if the rupture were situated in the posterior wall. He believed up to the present time all rents in the anterior wall terminated fatally. Where the rupture through the peritoneum was complete, but the child was only partially extruded and had been extracted through the vagina, and drainage had been used, there had been a small percentage of recoveries, but nearly all the patients who had recovered by the aid of this method remained invalids.

In complete rupture he would make abdominal incision, clean out the cavity of blood clots, and bring the peritoneum together with catgut. To sew up the wound in the uterus would probably be impossible because of its ragged and infiltrated edges. If the condition of the patient was good,

he would consider removal of the uterus.

Dr. EDWARD REYNOLDS, of Boston, disagreed with Dr. Lusk in the view of hopeless invalidism without operation, and quoted four instances of rupture of the uterus which recovered without operation.

Dr. E. P. DAVIS, of Philadelphia, said the fact that rupture of the uterus had taken place in a multiparous woman was pretty good indication that any attempt to repair the rent would fail, and spoke in strong favor of ligating the arteries and completely removing the uterus, as was suggested by Dr. Lusk.

Dr. POLK thought in cases of complete rupture it was best to deliver from below, and make repair from that direction, even to remove the uterus through the vagina, only opening the abdomen, if necessary, for cleansing purposes, suggesting that patients could stand a greater amount of operative interference through the vagina than through the abdomen.

R. A. MURRAY, M.D., New York, said, only in cases of rupture high up into the peritoneal cavity, where

drainage could not be secured from below, would he consider laparotomy as giving the patient the best chance of recovery, the Porro operation may be difficult or impossible because the tear may extend into the cervix and broad ligament.

Dr. CHARLES JEWETT, of Brooklyn, objected to the term Porro which had been used by many in these cases.

Dr. CUSHING, of Boston: Once when removing a fibroid tumor from within the uterus through the vagina it was found to extend through the entire wall, so that the hole left entered the abdomen. Evidently there was a good deal of hæmorrhage into the peritoneal cavity, and I therefore went on to perform vaginal hysterectomy as the only course which seemed open. Nearly a pint of blood was found in the pelvis; the patient made a good recovery.

Dr. McLEAN said, an important point brought out in this paper seemed not to attract attention in the discussion,—*i.e.*, that there might be rupture into the peritoneal cavity without infection, because of the protection afforded by the membranes protruding into the rent like a hernia. Under such circumstances palliative treatment would be proper.

Dr. FRANCIS H. DAVENPORT, of Boston, read a paper, "The Ultimate Results of the Treatment of Retro-Displacement by Pessaries."

DISCUSSION.

Dr. CUSHING, of Boston: I think this is a very judicious paper, yet certain exceptions may be taken to some of the investigations and conclusions.

I think the statistics are almost

valueless, from the fact that it is only so very recently that proper appreciation of the cause of backward displacement has obtained. All these old statistics in which displacement is treated of as a disease and not as a symptom are worth about as much as statistics about dropsy made up before the recognition of Bright's disease, etc. I think we should go upon the principle that when the uterus is in backward displacement it is either pushed back, or pulled back, or held down, or that it is too heavy, or something else has caused it to fall.

I know that in the hands of many men it is a very grave thing to treat backward displacements by replacing the uterus manually or by instruments and then using pessaries, and when you come to examine the patients carefully, especially surgically, you begin to find reasons why the treatment is unsatisfactory. I have taken substantially the same ground as the reader of the paper that very few cases require Alexander's operation; that they can either be made quite comfortable or cured by pessary, or else there is some condition which requires more than Alexander's operation. In those old cases which fail to be relieved by pessary and call for some operation, the uterus is almost always held back by some band, by some adhesion, and although it may seem movable and we may be able to lift it up, yet the moment the pessary is taken out it drops back, is in reality pulled back, therefore I dissent from the proposition of the author, that in cases not cured by pessary and where some operation seems necessary, or where the patient does not wish to wear a pessary, we should proceed to do Alexander's operation. I think

that in a very large proportion of the cases it is better to open the abdomen, find out the exact trouble, know what you are about, and cure your patient. The Alexander fad is happily declining. Over a year ago we had a discussion in Boston at which I took essentially the same ground which I do now.

There were men present who were doing Alexander's operation by the hundred and who said that it could be done even where there were adhesions; that if one could not find the round ligament or secure it in the inguinal canal, he could open the abdomen, find and shorten it there. Everything was for Alexander's operation. The same question came up this year, and there was no one present who would defend that side of the question.

There is very little call for Alexander's operation, except it may be in virgins with retroflexion, probably congenital, where one is quite sure there is no adhesion or complication; in other cases which cannot be relieved by pessary, by treatment preventing metritis, by proper repair of the perineum, and it is decided to operate, it is best to open the abdomen in Trendelenburg's posture, and after learning the exact condition of things, shorten the ligaments internally, and cure the patient.

Dr. CLEMENT CLEVELAND, of New York, said that he believed in the use of the pessary and also believed in Alexander's operation. He found the pessary useful in retrodisplacements, rarely did he use it in anterior displacements. Where the pessary did not cure within a year he suggests, but does not urge, Alexander's operation. He thought the Alexander

operation gave fully 75 per cent. of cures. He had varied the methods of anchoring the ligament somewhat by carrying the end of it, threaded on a Hagedorn needle, down beneath the integument over the pubic spine, out through the skin, and securing it, thus getting the benefit of more than the full length of the inguinal canal.

Dr. GEORGE EDEBOHLS, of New York, was very anxious that Dr. Cushing should not leave for Boston with the impression that the fad for performing Alexander's operation was dying out. Of course he referred to cases generally regarded as suitable for this procedure, those in which the uterus was not adherent and the appendages were normal. All of the 75 cases which had been operated upon by himself were cured. He thought the percentage of cures by the wearing of pessaries too small,—*i.e.*, 25 per cent. He strongly advocated the Alexander operation in cases of retrodisplacements.

Dr. E. C. GERUNG, of St. Louis, wished to make an explanation. He had been quoted as saying that rarely, if ever, a cure occurred from the use of pessaries. He thought he had been as successful as any one with the use of pessaries and still favored them and had what was called cure with them. He thought if a permanent anatomical cure was called for, some such operative procedure as the Alexander operation would be required, not the use of pessaries, but the future would have to determine the ultimate symptomatic results of fixation of the uterus by operation. He thought the Alexander operation had given good results, but that 95 cases out of 100 could be cured by pessaries.

Dr. R. L. DICKINSON, of Brooklyn,

spoke of the cause of failure in the use of pessaries. It was not necessary to lift the uterus with the pessary, but to see that unnecessary pressure was taken off from above. Everything which tends to reduce muscular tone in the pelvic organs must be avoided.

Dr. DAVENPORT made some closing remarks. He had performed Alexander's operation a number of times, and his results had not been as satisfactory as Dr. Edebohl's. He had been consulted by women, operated upon by other men, in whom the uterus had not remained forward, therefore he could not hold out to his patients a certainty of cure, not even in selected cases.

Dr. M. D. MANN, of Buffalo, read a paper on

INFLAMMATION OF THE URETERS FROM
A MEDICAL STAND-POINT. (See p. 663.)

Dr. J. M. BALDY, of Philadelphia, thought enlarged and diseased ureters very rare, yet many cases of obscure pelvic disease may be due to ureteric disease. He thought the whole practical outcome of the recent developments in study of the ureters is much less than we had expected or hoped. Regarding the treatment, he thought very little could be done further than to render the urine alkaline and less concentrated. He doubted the propriety of giving the patient a sweat-bath.

Dr. A. P. DUDLEY, of New York, reported two cases of inflammation of the ureters, and called attention to the liability to mistake disease of these organs for disease of the uterine appendages. In one case, in which the error had been made by a good

man, Dr. Dudley relieved the patient by applying packs of digitalis along the side on which the acute ureteritis existed. Salines were also given.

Pressure of pustubes may cause pressure on ureters as another case showed, where, after death, ureteritis was found.

Dr. W. E. FORD, of Utica, said that in his experience ureteritis had occurred more frequently in young women. He was called to operate for vesical calculus in a young woman. He opened the bladder, but to his dismay found no stone. At the end of two days several ounces of detritus passed through the opening which he had made; the patient died. At the autopsy he found the left ureter so dilated that he could pass his finger through its entire length.

He had at present under observation a patient, who scarcely left the commode for three years, examination failed to show cystitis or any marked disturbance of the uterine appendages. He agreed with Dr. Mann that the condition of the urine was a very potent cause of pain. He thoroughly advocated the use of two quarts of hot water into the bowels two or three times a week for its diuretic effect.

Dr. CUSHING, of Boston: I have been surprised at Dr. Baldy's suggestion as to the lack of practical results following our knowledge of ureteritis. In connection with abdominal operations I have learned to look for obscure conditions of the kidneys which are not detected by simply examining the urine for sugar and albumen, as is done by routine. One case, I remember distinctly, in which both ureters were almost obliterated by pressure of a fibroid tumor at the brim

of the pelvis. Both ureters had become dilated. The patient died. Other patients had sometimes died after operations in whom there was no sepsis, no peritonitis, but simply gradual failure, and after death I found kidneys cystic, the ureter dilated. Two such cases which I now recall showed no albumen in the urine. I can also recall certain other cases of obscure pelvic disease, with pain and frequent micturition, which puzzled me exceedingly as the writer has stated, in such cases the trouble was referred to some obscure pelvic disease, but I am now of his opinion that there probably was disease of the ureters. The other day a woman was sent to my hospital who had been supposed by several gentlemen to be suffering from vesical calculus, but careful examination under ether failed to reveal stone. She was suffering from pain and frequent micturition. In the absence of anything else to do,

she was put to bed, the urine was rendered alkaline, the bladder was treated for cystitis, and she got better soon. I now believe it was a case of ureteritis, and that the paper read to-day will throw light on many such obscure cases.

Dr. MANN made the closing remarks. Referring to Dr. Baldy's part of the discussion, he thought ureteritis was apt to be overlooked, and for that reason insisted on the necessity of careful examination of the urine as to quantity and quality. He thought the quickest way to start the action of the kidneys was to relieve the kidneys of congestion by hot-air baths, by sweating the patient get rid of the poisonous substances which had accumulated in the system and which the kidneys had been unable to excrete, so that within a few days the kidneys were able to do four times as much work. In addition, alkaline waters were given.

SOCIETY REPORTS.

Cincinnati Obstetrical Society.

STERILITY TREATED BY ELECTRICITY.

DR. C. D. PALMER: It will be remembered that several months since I made mention of a case of sterility which I considered cured by means of the galvanic current. It was a form of sterility which is perhaps one of the most, if not the most, common form. It is a congenital condition, arising in the second period of devel-

opment of the uterus, in which the cervix becomes elongated, the os externum very small,—pin-holed,—and the whole uterus is more or less imperfectly developed,—the infantile uterus.

The galvanic current was used as follows: The positive pole externally over the abdomen, and the negative pole placed intra-uterine, so that the cervical canal might be dilated and

the whole uterus enlarged. After repeated applications and occasional intermissions of any treatment, the patient became pregnant. When I had reported the case to this Society she was in the seventh month of utero-gestation. She underwent parturition a few weeks since. Towards the end of the normal term of gestation I visited her once a week to see what progress was being made in the natural process of obliteration of the cervix, occurring usually within the last two weeks. Now, noticing that the os externum was still small and contracted, although she had approached to the time of parturition, according to the Naegeli rule, I commenced an artificial dilatation with my metallic forceps, using first the smaller and then the larger size. This procedure induced feeble pains, and in a few days genuine labor set in. But the first stage was the most prolonged and perplexing one I have ever witnessed, extending over a period of three days before a sufficient amount of dilatation had been accomplished to introduce my hand within the uterine cavity. By this time the patient was very much tired out, had a frequent pulse, and a slight elevation of temperature. The manual examination revealed a right sacro-anterior position of a breech presentation, a complete extension of the foetal legs on the flexed thighs, and a contracted pelvis of the mother in its antero-posterior diameter of the brim. This pelvic contraction did and could have no influence in delaying the progress of the first stage of labor. The same was due only to the imperfectly-acting uterus. Needing assistance, I sent for Dr. Edward Mitchell, and after a hot-water antiseptic vaginal

injection, and the administration of chloroform to complete anæsthesia, I commenced podalic version. The high position of the foetal feet within the uterus and the somewhat tetanic condition of the uterine walls delayed me in bringing down both feet and the delivery of the whole body of the foetus save the head. Anticipating that I might have to contend with a retained head because of the maternal pelvic contraction, after a reasonable traction on the foetal neck, favoring utmost head flexion, I applied my obstetric forceps and made prolonged vigorous traction. Then I requested Dr. Mitchell to continue this forceps traction, while with the two fingers of the right hand I pushed back on the occiput, and with the same fingers of the left hand hooked in its mouth I pulled down the lower jaw. These combined efforts of both were successful in effecting delivery of an asphyxiated child. Dr. Mitchell then devoted his entire attention to the resuscitation of the child, and he was successful after prolonged efforts. Of course, the delay in the delivery of the child's head and pressure on the umbilical cord explained this asphyxia.

Prior to the commencement of labor-pains, and before artificial dilatation of the cervical canal, I measured the exterior of the pelvis in three of its diameters, to detect, if possible, any malformation. External pelvimetry revealed none. This procedure only proves how unreliable external pelvimetry is in confirming a pelvic contraction. Many pelvic deformities, if slight, especially the juxto-minor, can be detected only in parturition itself.

After the delivery of the placenta, as is my invariable custom, I pro-

ceeded to irrigate the vagina with hot water antiseptized with bichloride (1-4000), and then observed an unusual post-partum flow, although the uterus itself was in normal position and size. The blood seemed to proceed from the vagina, and it could be seen coming from a rupture of the veins of the "bulb of the vestibule." The latter was checked by a ligature passed beneath the bleeding vessels, and, suspecting a rent of the cervix as the cause of the former, I exposed the cervix with a large Sims speculum, and passed three silk sutures to close this rent. The patient made a smooth and uninterrupted recovery, notwithstanding she was nearly pulseless after the sutures were placed.

Among other questions which may arise in discussing this case, I wish to state that it has been my habit to stitch a lacerated cervix immediately after parturition, if the tear is noticed as much as to within the vaginal vault, and always if the torn cervical walls are the source of the post-partum hæmorrhage. There is but little doubt that some of the few cases of post-partum hæmorrhage, occurring at the present time and ending fatally, might be reversed by inspecting and suturing primarily the rent structures.

Some may think that the method of effecting dilatation of the imperfectly dilated cervix, by incisions, as recently recommended, might have been practised in this case. While the cervix was imperfectly dilated for a full passage of the fœtal head, still it was dilatable. The delay in the delivery of the fœtal head was from the contracted pelvis of the mother. It has always seemed to me that this obstetric surgical procedure of incisions of the cervix is adapted

for cases only in which the imperfect dilatation is owing to morbid organic changes within the structure of the cervical lips, and not to cases of imperfect dilatation from functional causes. While dilatation was about three-fourths complete, when podalic version was performed, the cervix was soft and dilatable. This, then, is not a condition calling for cervical incisions.

DISCUSSION.

Dr. E. W. MITCHELL: I had the pleasure of seeing this case with Dr. Palmer, as he has stated, and I can certainly congratulate the doctor on the result, both to the mother and to the child. I expected the child would be asphyxiated beyond recovery, and I certainly think the doctor has every reason to be congratulated upon the skill he showed in the management of the case, which was unusually perplexing from the beginning to the end.

These cases of infantile cervix are always troublesome. They are slow in dilating, and they are far more liable to occur in women who are delicate and have not very great muscular strength; the woman becomes exhausted and worn out, and they are almost certain to be lacerated, no matter in what way the delivery occurs. The question might arise whether the use of electricity in this case might not have altered the normal tissues so as to predispose to the rigidity and the liability to laceration. From the fact that a cervix like this will almost always be lacerated anyway, I think it is doubtful whether the electricity has any such effect. When I saw the case there was in my mind no question what-

ever, but we had come to the right conclusion, that the time had arrived when the woman should be delivered. The cervix was sufficiently dilated and sufficiently dilatable for the dilatation to be completed by podalic version.

As to whether the cervix should be immediately repaired. After we had repaired the perineum and placed a suture in the bulb of the vestibule, the hæmorrhage at first seemed to have ceased, but then we found it was coming from the lacerated cervix. I have never made a practice of immediate repair of the cervix. It is an operation that is not so difficult to do at this time, and yet when your patient is exhausted and the friends are anxious that she shall rest, it takes a certain amount of tact to get the consent of the patient and friends to proceed with the repair of the cervix, as well as some courage on the part of the operator to go ahead with it. I think the best practice, probably, would be to repair it immediately, and I am not sure but I shall come to that practice.

In this case the doctor tells me the repair of the cervix was very good after the stitching. The case illustrates the value of the speculum in cases of deformity.

Dr. C. E. CALDWELL: The case which I wish to report was seen by Dr. Porter with me nearly two years ago. I was called to deliver a dwarf, 41 years of age, and a primipara. I found the pelvis small, but there seemed to be no irregular contracture. I did not use a pelvimeter, but I made up my mind that a fair-sized foetal head could be delivered. I was called to see her in the night. I came to the conclusion that the head would not be discharged spontaneously, and I

called Dr. Porter, who administered chloroform, while I proceeded to apply the forceps. When I tried to apply them it seemed they were almost wedged between the head and the pelvic bones. They were finally adjusted, and the head with great difficulty delivered, after which the child was quickly delivered. There was a laceration of the perineum laterally, which also ran up quite a distance. The cervix was torn, and there seemed to be nothing to do but to repair everything. I think about fifteen stitches were introduced. The patient recovered uninterruptedly, and in three weeks was doing her own work. She has since been in perfect health.

I am persuaded, where there is a laceration and a large surface for absorption, the only thing to do is to primarily unite the cervical wound. Of course this is to be done only when the patient is able to stand it; but even when considerably exhausted, the few extra minutes spent in a repair of the cervix are to the advantage of the woman rather than to her disadvantage. It seems to me there will then be no necessity for a second trachelorrhaphy.

Dr. WENNING: Whatever I have to say will not be said in criticism of Dr. Palmer's case. It is always easier to tell afterwards what could best be done. It seems to me, considering the length of the first stage, that this was a typical case for deep incisions of the cervix, and it is in just such cases that they are recommended. Possibly, if that had been done earlier, the labor would have terminated sooner with less difficulty. This, of course, is an intentional traumatism, and we cannot tell how far the laceration would have extended beyond

the cut surface. Nevertheless, if we can carry the incision just to the proper degree, so we can introduce the hand or instrument, I think it would probably obviate the necessity of a laceration, which would otherwise inevitably occur. Therefore, why not make an incision sufficient to introduce the hand and deliver? This, of course, brings us to the question of suturing. In every case the cervix should be sutured, just as any other wound. I think in the great majority of cases it is not necessary. The primiparæ always have a laceration of the cervix, just as well as of the fourchette, but if it does not extend very far up, the hæmorrhage will not amount to much. If there is a spurting of a ruptured vessel it should be sutured. The deep incisions are necessary sometimes for

a double purpose: First, to prevent further hæmorrhage; second, to insure against infection.

Dr. BONIFIELD: It seems to me there is one other question that might be brought up, and that is, whether it is worth our while to try to cure sterility in cases of infantile cervix.

I have never been in the habit of suturing the cervix unless there is considerable hæmorrhage. I think frequently there will be good union, and not enough scar to amount to anything. I have always had some hesitation about making what seems to the bystander such a formidable operation. Of course, if the hæmorrhage is sufficient to be alarming, it should be stopped as well as if it were from any other part.

ABSTRACTS FROM CURRENT LITERATURE.

BY CHARLES GREENE CUMSTON, M.D.,

BOSTON, MASS.

The Use of Cocaine for Suppression of the Secretion of Milk.

Dr. JOISE, professor at the Faculty of Lille, has observed, as have other obstetricians, that cocaine, when applied to cracked nipples, has the power of diminishing the milk secretion, and from this fact he was led to the use of this agent when he desired a complete suppression of milk. He prescribes a 5-per-cent. solution as follows:

R Cocain. hydrochlorat.,	5.0
Aq. dest.	
Glycerini,	āā 50.0

This solution is applied with a soft

brush five or six times daily to the nipples. Suppression of milk is obtained in from two to six days. He has never experienced any inconvenience from the use of this drug on account of the small surface to which it is applied. Cocaine, by producing anæsthesia of the nipple, prevents its erection, thus favoring, according to the writer, the decrease in the quantity of milk.—*Bull. méd. du Nord*, review in *Journ. de Méd. et Chirurgie*.

Treatment of Vulvo-Vaginal Vegetations by Cauterizations with Pure Carbolic Acid.

DR. RAULIN says he has treated with success vulvo-vaginal vegetations of considerable extent by this method, formerly employed by Tomaso de Amicis, Jullien, and Derville. The treatment is as follows: After carefully washing and cleaning the parts, the bottle containing the carbolic acid is heated either by a flame or by placing it in boiling water until the substance is liquefied. A piece of absorbent cotton dipped in the acid is passed over the entire surface of the vegetation. The color of the tumor turns immediately from the pink that it was to a dull white.

This layer is eliminated after two or three days, or is removed by washing, and another application is made in the same way. The neighboring parts are covered with vaseline, so as to protect them from the acid. The applications are entirely free from pain, and even if there were, a little cocaine will be all that is necessary. The therapeutic effect of these applications is sure and rapid. In one of the writer's cases three applications were quite sufficient.—*Journal de Méd. de Bordeaux*, review in *Journal de Méd. et Chirurgie pratiques*, July 10, 1894.

The Operative Treatment of Backward Displacements of the Uterus.

DR. E. W. CUSHING: The conclusions of this memoir are as follows:

(1) Many cases of retroflexion and many cases of retroversion, if uncomplicated, cause little disturbance, and do not require operation.

(2) Severe *retroflexion* in virgins, giving rise to symptoms sufficiently severe, is better relieved by operation.

(3) Cases of retroversion which cannot be made comfortable by simple measures, such as the pessary, are usually obdurate on account of some complication requiring operation.

(4) Of the operations designed for the cure of retro-displacements, the only ones worth considering are the Alexander-Adams's operation, the various methods of intra-abdominal shortening of the round ligaments, and ventro-fixation.

(5) There is a legitimate and useful

field for Alexander's operation, subject to the following limitations: the uterus must be free; the diagnosis must be exact; the anatomical conditions must be favorable.

(6) When the above conditions are not present, it is better to make a median abdominal incision and act according to circumstances.

(7) After opening the abdomen, if no complications are present, the uterus may be secured in antiposition by shortening the round ligaments internally and by placing at each cornu uteri one suture passing through the abdominal wall.

(8) The latter operation may be properly performed instead of Alexander's, if the surgeon prefers it, as it is equally safe and more reliable on the average.—*Gynecological Transactions*, Vol. xviii, 1893.

Transverse Positions of the Vertex in the Inferior Strait of the Pelvis.

DR. MAURICE MURET: The *résumé* of this very interesting paper is as follows: *Etiology*.—(1) Primary transverse positions occur in non-rachitic but flattened pelvis when the foetal head is greatly developed (pelvis having a double congenital dislocation of the femurs); in flattened and generally narrow pelvis; funnel-shaped pelvis "*en entonnoir*;" large pelvis and small head. (2) Secondary transverse positions occur in: occipito-posterior presentations arrested during their rotation; large heads; insufficiency of pains. (3) Mixed cases: flattened pelvis and occipito-posterior presentation arrested during rotation.

Evolution.—*Rotation can be finally accomplished* at the inferior strait or in the muscular part of the pelvis. In both cases spontaneous delivery the head is in the occipito-pubic, more rarely fronto-pubic presentation.

Rotation cannot take place on account of arrest in labor from insufficient pains; very strong pains, producing a sort of wedging in of the head with œdema of the vulva; the head descends from the bony pelvis into the soft pelvis in a transverse position; the head disengages transversely.

Diagnosis.—Measurements of pelvis important. In primary transverse positions the O.I.S. left occipito-iliac are most frequent; in the secondary, the position is always O.I.D. The relative height of fontanels variable; the greater fontanel is low down, more commonly in secondary than in the primary positions; in the latter position the small fontanel is more frequently low (flattened and generally narrow pelvis).

Prognosis.—Relatively favorable

for both mother and child. However, there is danger of vaginal fistula, large lacerations of the perineum, rupture of pelvic articulations for the mother; for the child, long duration of the accouchement, compression of the head, intracranial hæmorrhages.

Treatment.—This should be expectant as long as possible. Hygienic measures. Lateral decubitus. Stimulants to fortify the patient and bring on the pains. Uterine expression according to Kristeller's method. Tarnier's manual method. When indicated, the forceps should be applied in one of the oblique diameters of the pelvis. Never apply them in the antero-posterior diameter! Excepting in cases of absolute necessity, never apply the forceps on the occipito-frontal diameter of the head. Do not use forced rotation with the forceps. Simple traction. Once the head in the soft pelvis, remove the forceps. In cases of transverse position in the soft pelvis, employ my manual method for correcting the position.¹ Perforation of the head is rarely necessary. If the child is alive and if the disproportion is not too great, do symphyseotomy preferably. If the child is dead, perforation is to be preferred to a difficult delivery with the forceps.—*Nouvelle Arch. d'Obstet. et Gynécol.*, May and June, 1894.

¹ Muret's method is as follows: Two fingers of the right hand are introduced into the vulva and the small fontanel is searched for. This is usually found immediately above one of the sciatic tuberosities, and aided by the projection formed by the union of the lambdoid and sagittal sutures, the occiput is brought forward, while with two fingers of the left hand in the rectum, the forehead is at the same time pushed towards the perineum. This manœuvre is accomplished without difficulty and the head disengages rapidly.

The Treatment of Stricture of the Cervix by the Plastic Method.

PROFESSOR F. VULLIET: Strictures of the lower segment of the uterus are frequently met with, and, as is well known, produce dysmenorrhœa, sterility, and endometritis by retention. In these cases, the external orifice is found small, the vaginal portion of the uterus is longer than normal and bent forward, the body of the organ is very anteflexed, the cavity enlarged and deepened; at the junction of the cervix with the body is found an angle of flexion corresponding to the internal orifice.

On account of the bad success of catheterism, dilatation, or discission, Vulliet recommends the plastic operation that he has performed in one case. The steps of this operation are as follows: (1) Draw the cervix down and backward as if anterior colporrhaphy was to be performed. (2) Separate the vagina from its anterior insertion on the cervix by a curved incision and decorticate up to the angle of flexion. If this curved incision is not sufficient, a perpendicular incision is made on the median line above the first incision. A sound is introduced into the bladder serving to draw it away from the field of operation. (3) A grooved sound is introduced into the uterus, and the assistant, holding it, directs the groove towards the operator and keeps the uterus fixed. (4) The point of a knife is pushed through, a little above the extremity of the cervix, until it reaches the groove of the sound, and the incision is continued upward until it reaches about two centimetres above the strictured part. Another incision

is now made. Starting from the lower end of the first, it follows a horizontal course, or rather that of a spiral, embracing the left half of the cervix, and ends at the external orifice more or less behind, according to the length desired to be given to the flap. The flap thus formed is a triangle, its base adhering to the intact part of the cervix. By this base the flap is nourished until it is well united to the parts to which it is sutured. (5) The summit of the flap is seized with forceps and a suture is passed connecting it with the upper end of the incision. Two or three others are passed through the borders of the flap, uniting it with the lips of the vertical incision. The cervix is thus widened the same amount as the width of the flap. It now remains to close the wound. To do this, it is well to suture the upper point of the vaginal incision to the cervix with the same suture which united the flap. The parametrium is thus closed off. When only a curved vaginal incision has been made, the upper suture ought to be left in the wound, a circumstance not so favorable, consequently another reason for making two vaginal incisions at the beginning. It is easy to understand that a part of the flap will remain intravaginal and that another part will be in the parametrium. It is important that this second part is entirely free from mucous membrane, and it is easier to remove this at the beginning before the formation of the flap than when the latter is already detached.—*Centralblatt für Gynäkologie*, January 27, 1894.

Valvular Disease of the Heart and Pregnancy.

DR. VINAY, whose treatise on "Diseases of Pregnancy" we analyzed in the ANNALS, publishes a paper in which he believes that too much danger is generally thought to exist when a pregnant woman has heart-disease, and shows by numerous cases that a valvular lesion is compatible with a normal pregnancy in a great many women; however, it is necessary to establish a certain number of classes. The first class comprises the rather numerous cases in which the cardiac affection, latent before fecundation, continues so during pregnancy, labor, and after labor. These cases are without a doubt more numerous than has been admitted up to the present time. A second class is composed of cases in which the function of the heart is only slightly disturbed for the first time during pregnancy. Without being as favorable as for the first class, the prognosis remains benign, because the cardiac insufficiency is only slight, and may be attenuated by rest in bed and medical treatment, and the accidents disappear after labor is over. The third class are those cases where all the cardiac symptoms due to gestation appear, and a fatal end arrives at a time more or less far from the moment of conception. It is easy to see that this last class has especially attracted the physicians' attention, and made them conclude that there is always aggravation of the heart lesions during gestation. The presence or absence of albuminuria is an important element in the prognosis. Its presence in the urine of a cardiopath always indicates an advanced insufficiency of the myocardium, and a fault in compensation,

and in pregnant women more particularly its signification is unfortunate on account of its effect on the functions of the heart itself. Now, how can the following question be replied to, and it is one often asked, Can marriage be allowed in a young girl having a cardiac lesion, no matter what may be its nature? Peter's formula is well known: girl, no marriage; woman, no pregnancy; mother, no nursing, if you have heart-trouble. Jaccoud is less absolute; he admits temperaments, and tries to distinguish according to the given case. If the patient has never suffered, and the lesions are well compensated, there is no reason why marriage is contraindicated; however, the social condition of the patient must be considered, and if she will be obliged or not to work during her pregnancy. Professor Jaccoud goes still further, and thinks that certain accidents from asystole, such as slight œdema of the maleoli or palpitations are not contraindications to marriage. It is only when there exists dyspnœa, hæmoptysis, and well-marked symptoms of cardiac asthenia that marriage should not be allowed. Dr. Vinay is of Jaccoud's opinion, and has seen too many cases of heart-disease support pregnancy and labor without accident to absolutely refuse to allow marriage in young ladies having cardiac lesions; he makes no distinction between lesions of the orifices, be it aortic or mitral, on condition that the lesions are compensated, and that at no time have there been serious accidents due to asystole, and that there is no albumen in the urine. If there be present dyspnœa, bronchitis, slight œdema of

the malleoli, these may be put right by absolute rest in bed, administration of digitalis, and a milk diet, and after her labor the young patient will be all right, and her health will come back as before gestation. But if the patient has already had accidents before her marriage, presenting well-marked symptoms of cardiac insufficiency, as pulmonary congestion, hæmoptysis, and especially albuminuria, it may be certain that gestation will be seriously troubled, and the fœtus

greatly compromised. It is difficult in cases of this kind to make absolute rules; each case should be examined in particular, and it is only after a careful examination of the bronchial tubes, lungs, kidneys, liver, the state of menstruation, the size and functions of the heart, that the physician can render a decision so very important for the future welfare of the young patient.—*Archives de Tocologie*, review in *Journal de Médecine et de Chirurgie*, February 10, 1894.

Metritis and Prolapsus Uteri.

BONILLY: This was the title of a paper read at the Société de Chirurgie de Paris, *séance* of April 18, 1894. The speaker said that when the painful symptoms were examined in women suffering from diseases of the genital organs, it is often difficult to say what part the uterus plays and how much the nervous system is at fault. Thus, glandular cervical endometritis, hæmorrhagic endometritis, and the greater part of the cases of endometritis, without extension to the uterine parenchyma or adnexa, are indolent diseases by themselves. On the contrary, pain is frequent in metritis of the cervix, following a tear (parenchymatous cervical metritis with sclerocystic degeneration). It is met with also when the metritis has attained the muscular layer of the body of the uterus (total parenchymatous metritis, with hæmorrhages and glandular secretions). The painful functional disorders are at their maximum when this total metritis is added to a lacerated and weak perineum, relaxation of the ligaments,

and lowering of the uterus. In other words, the infection following laceration of the cervix, the ulterior metritis, total or cervical, complicated with a too weighty uterus, a relaxation of the pelvic floor combined with a certain degree of prolapsus, produced a particular symptomatic complexus. The patients complained of pain in the lumbar and sacral regions and in the thighs. The erect position, walking, etc., could not be prolonged without speedy fatigue. The horizontal position gives relief; there are no acute inflammatory attacks in the pelvic organs. Dyspeptic troubles with flatulence and constipation are usually present. Sometimes ptosis of the kidney or liver is discovered. At last, after a certain time, queer, tenacious nervous symptoms are observed that have been decorated with the name of neurasthenia. The physical signs consist in a laceration of the perineo-vaginal floor, prolapsus, and a parenchymatous metritis, either cervical or total; the adnexa are healthy. A complex therapeusis

should be instituted for this complex condition, and each morbid element should be treated singly and simultaneously with all the others. The uterine mucous membrane and parenchyma, the perineal floor are treated at the same *séance*, if no one of these lesions are desired to remain and that all are to be cured at the same time. In the first place, a curettage of the

uterine cavity is done, then an amputation and restoration of the cervix is performed, in order to remove the embryonic tissue, and the glands that have undergone sclerocystic degeneration, and, lastly, the *séance* is terminated by perineorrhaphy to restore the statics of the pelvis. For ptosis of the abdominal organs, suitable bandages, such as Glénard's, are applied.

BOOK REVIEWS.

A MANUAL OF THERAPEUTICS. By A. A. STEVENS, A.M., M.D. Philadelphia, 1894: W. B. Saunders, 925 Walnut Street.

This little manual, which in the author's preface is announced for the use of students, is good. The first part comprises the drugs arranged in alphabetical order, which renders it easy to the reader desirous of referring to any given medicine. The physiological actions, administration, and therapeutics of each preparation are very well treated, and a few good formulæ are scattered through the book, serving to give an idea of prescribing and combining certain drugs. We are rather surprised to see that the author prefers the official extract of ergot to that of Bonjean's for hypodermic use. On the other hand, in speaking of the therapeutics of terebene, we are glad to find mention made of the use of this drug as a dressing in cancer of the cervix, the formula being as follows:

R Terebene.
Ol. olivar, āā equal parts.

Personally, experience with terebene in this fearful affection has been most excellent, relieving pain and removing all odor, and we are glad to see this indication noted by the author of this manual. Borax is also mentioned as a substitute for the bromides in *nocturnal epilepsy*, but the writer has not apparently had much personal experience with this useful drug, for he adds that "it may be employed when the older remedy fails." Part second is a rather too short review on remedial measures other than drugs, including bloodletting, venesection, cold, heat, electricity, massage, lavage, counter-irritation, etc. The part treating on applied therapeutics is as complete as the size of such a work will permit. The last chapter of the work, on "Incompatibility in Prescriptions," by Joseph W. England, Ph.G., is nothing to boast of. The manual terminates with a table of doses, index of remedies, and an index of diseases. On the whole, the work is very good, and the publishers deserve much praise for the printing and binding. C. G. C.

DE L'AGRANDISSEMENT MOMENTANÉ
DU BASSIN. PAR LE PROFESSEUR
A. PINARD. Paris, 1894: G. Stein-
heil, Editeur.

This brochure of fifty-nine pages is a paper read at the Congress at Rome this year.

As I have given a *résumé* of the conclusions of the author in a former number of the ANNALS, it is not necessary to repeat them here. Suffice it to say, that on account of the great authority of the author on symphyseotomy this valuable little work will be found most important to those who are interested in this revived obstetrical operation. The work is illustrated by twenty-four excellent engravings, and the records of ten selected cases are appended.

AN AMERICAN TEXT-BOOK OF GYN-
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There certainly is no excuse for the members of the rising generation of American physicians if they do not acquire a good knowledge of gynæcology, for systems, manuals, and text-books in great variety are provided for them.

It might be said that there was no need of another American book on gynæcology, just as it is often said that there is no need of another doctor in a town where there seem to be enough already established. We think, however, that this is a very narrow view to take, for nothing is more certain than that excellence is the result of competition, and the only way to know whether a new book or a new doctor is justified in appearing is to make a trial and watch the result.

Times change rapidly, and with them men and methods. In nothing is this more true than in gynæcology, and the readers of the ANNALS who have followed in its pages since 1887 the wonderful development of our art know how striking and how sudden the changes of practice have been both in theory and method.

The present time seems to be a good one to stop and examine the results of all this activity, to see where we stand, and in what points further progress is possible or desirable. In many departments of our specialty it hardly seems probable that there will be any material changes unless some wonderful new discovery, such as the overcoming of sepsis or the cure of cancer, should revolutionize the art.

In some other departments there are still advances to be made before there is a satisfactory precision of current practice.

Now to know where we stand at present two courses are open, first, to follow closely the course of opinion and practice as shown in the journals, the hospitals, and the meetings of special societies, national and local; the other is to have a dozen or more representative men, workers and in-

investigators, write jointly a work covering the whole subject. The first method is one which can be followed only by a few; it is the best, but it is for teachers, operators, and specialists. The second is for the far greater number who have to do gynæcological work or to advise that it shall be done, not being specialists themselves.

For students, the second is the only course possible, and to us it seems really delightful to contemplate the way in which the student can have his unbiased and receptive mind filled and furnished with the result of the struggles and advances of the last quarter of a century, having nothing to unlearn of false theories, no stubborn prejudices or illogical mental habits to overcome.

The time is therefore propitious for the appearance of a work not too large to be a text-book, and yet large enough to embody the consensus of opinion of a dozen or more of representative teachers and specialists. The excellent publication which we are considering certainly answers well to our legitimate expectations. It is clear, sound, judicious, modern, exact, and thorough. This is not the place to discuss in detail the various methods and technique of the different operations as there laid down.

In some points we might think another way preferable, in many others we have received great profit from careful reading of the descriptions in this volume. What is particularly valuable is the very thorough and hearty recognition of the modern theories of sepsis and infection, and the careful explanation of the antiseptic precautions and aseptic technique to be employed.

It is not necessary here to go into

an analysis of the separate chapters; the whole subject is covered, and a judicious amount of space assigned to each part of it. The distinguished authors have not signed the different chapters which they have written, but have become responsible, "jointly and severally," for the theories and methods advocated, thus minimizing differences, and emphasizing consensus of opinion.

It is easy for one acquainted with the different authors and their environment to recognize much of their work by style, by contents, and by the illustrations. It would be invidious to discriminate between the different sections, but we may point out that the chapters on hysterectomy with their lucid and original illustrations have admirably set forth the very latest and best methods and indications of this operation, thus taking advantage of all the wonderful progress which has been made in this operation within the last two or three years.

The illustrations of the work demand special commendation. To be sure, the naked figures photographed to show gynæcological postures have provoked some criticism, but we have published the same or similar pictures in this journal, and thereby taken a position which approves of their appearance in this book. Neither is the work meant for general circulation, nor for the public, and if any one finds that these pictures injure him he is in a false position as a practitioner of gynæcology.

The half-tone plates illustrating the different articles are admirable, and the micro-photograph of decidua, on page 535, is a masterpiece.

As the writer was one of the very first to introduce the use of half-tone work into medical journalism, and made and published what he believes to have been the first micro-photograph, reproduced by this method in 1887 in this journal, it is with peculiar interest that he sees the method of teaching medicine by photographic illustration so thoroughly carried out in this volume.

E. W. C.

A TEXT-BOOK OF THE DISEASES OF WOMEN. By HENRY I. GARRIGUES, M.D. Philadelphia: W. B. Saunders, Publisher, 1894.

The author in his preface states that he has had first in view, to make this book take the place of a post-graduate course to those whose training in gynæcology has not been sufficient, and, secondly, a practicable and scientific exposition of the art for those of the profession finding it impossible to leave their practice and are desirous of keeping abreast of recent progress. It is also intended for under-graduates. The work of Dr. Garrigues has been done faithfully and with clearness. The work opens with long and excellent chapters on the development of the female genitals; the anatomy of the pelvic organs; physiology, including puberty, menstruation, and ovulation, copulation, fecundation, and the climacteric. The chapters on eti-

ology in general, examination in general, and treatment in general are well done, and many instruments with their use is given in the last-named chapter. Abnormal menstruation and metrorrhagia are treated at length and most practically. In passing, I would note the formula of the author's anti-dysmenorrhœic pill, which, as he judiciously remarks, he prefers prescribing to morphine when the case is not too severe.

R	Ex. conii alc.,	᾿Ι
	Ex. scammon. alc.,	
	Ex. opii,	ãã gr. v.
Ft. pil. No. x.		
SIG.—One pill at most, three times a day.		

Diseases of the vulva, perineum, vagina, uterus, Fallopian tubes, and ovaries take up 367 pages of the work, are treated in all their details, and numerous figures of instruments, operations, etc., render the text still clearer. The work terminates with sections on diseases of the pelvis and sterility. A detailed criticism of a so considerable volume would take too much time, but after reading this book one is struck with its clearness and practicable value, and should, we believe, fill the place that the author intended it for. As usual, Mr. W. B. Saunders has published this volume in the same excellent taste as the other works coming from his press.

C. G. C.

ANNALS

—OF—

GYNÆCOLOGY AND PÆDIATRY.

DEPARTMENT OF PÆDIATRY.

ORIGINAL COMMUNICATIONS.

Notes on Infantile Therapeutics.

BY CHARLES GREENE CUMSTON, B.M.S., M.D.,

Formerly Assistant at the Butini Hospital, Geneva, Switzerland.

In this short paper I have only the intention of passing in review the treatment of two pulmonary diseases, so frequently met with in children,—namely, broncho-pneumonia and capillary bronchitis.

Broncho-Pneumonia.—During the acute stage the child should be kept in bed, the legs and thighs enveloped in cotton covered with rubber protective. The cotton should be changed every day. An infusion of the leaves of eucalyptus or the following formula should be placed beside the bed and allowed to slowly simmer over an alcohol lamp :

R Tinct. eucalypt.,
Spts. terebenth., ãã 50.0

Care must be taken that the spirits of turpentine does not come in contact with the flame of the lamp.

The food should consist of milk, bouillon, whey, or custard. Hot drinks may also be given, such as a very light grog. A blister the size of a 50-cent piece should be applied over the points of induration. The blister should be left in place for two hours, after which a starch poultice is substituted. The vesicle should be opened with a needle which has been sterilized by passing it through a flame, care being taken not to remove the epidermis, and the part should be dressed twice daily with vaseline. The blisters are to be repeated on the following days, if necessary. Morning and night a poultice containing a little mustard is applied to the chest and allowed to remain for from five to ten minutes until the skin begins to redden. If oppression is very great, ten or fifteen dry cups

should be applied. If cough is frequent and the child restless, the following potion will be found of use :

R Antipyrini,	0.30
Syr. quinin.,	30.0
Syr. eucalypt.,	40.0
Aq. menth. pip.,	50.0 M.

SIG.—A teaspoonful to be given every hour.

Where there is a tendency to collapse, the following is to be prescribed :

R Ammon. acetat.,	2.0
Vini hispan.,	60.0
Syr. ether,	20.0
Aq. menth.,	40.0 M.

SIG.—A teaspoonful to be taken every hour.

High temperature should be treated by the cold bath in the following manner: When the temperature is over 102° F., the child should be placed in a bath (the temperature of which should be *measured with a thermometer, not guessed at*) ranging from 68° to 77° F., and remain in the water for five to ten minutes, and then taken out and wrapped in a woollen blanket and rubbed down with heated and dry towel. The bath should be repeated every three hours until the body temperature is reduced.

Treatment of Convalescence.—Substantial food: hashed meats, eggs, vegetables *en purée*. The child should be kept out in the air, and, if possible, sent to the country. A cure at Mont Dore, in France, will be most beneficial to those who can afford the expense. Every morning one or two dessert-spoonfuls of cod-liver oil should be given, and a dessert-spoonful of the following is given three times a day after meals :

R Syr. quinin.,	40.0
Syr. terpin. hydrat.,	50.0
Syr. ferri iodid.,	gtts. lx
Aq. menth. pip.,	50.0

Another formula which has given me good results, and which necessitates only one prescription, is the following :

R Ferri benzoat.,	1.0
Ol. morrhuae,	100.0 M.

SIG.—A dessert-spoonful three times a day.

The ferri benzoate is a most excellent preparation of iron for children.

Capillary Bronchitis.—The legs and thighs should be enveloped in cotton, which is changed daily as in broncho-pneumonia, and the eucalyptus evaporated by the bedside. A vomitive should be given in the commencement of the treatment, the following being a good combination :

R Pulv. ipecac.,	0.50
Syr. ipecac.,	50.0 M.

SIG.—A teaspoonful to be taken every five minutes until effect is produced.

The blisters and sinapized poultice are indicated, and their application and care are the same as I have pointed out in broncho-pneumonia.

For oppression, the potion given above, containing the acetate of ammonia, should be given, and the food should consist of bouillon and milk.

In both affections I believe that intestinal antisepsis should be practised, for I have seen a number of cases with autopsies, in which I have demonstrated bacteriologically that death was brought about as much by intestinal infection as by the pulmonary affection. I would advise one of the following powders to be administered in milk four times daily, in order to prevent the serious complications arising from intestinal infection :

R Naphthol B.,	0.10
F. chart, No. 1, d. tal. dos., No. xv.	

Or :

R Benzo-naphthol,	0.20
F. chart, No. 1, d. tal. dos., No. xv.	

ABSTRACTS FROM CURRENT LITERATURE.

The Results Obtained by Conservative Treatment in Tuberculous Coxitis.

BRUNS (*Archiv für klinische Chirurgie*, Band XLVIII, Heft I, 1894), in the study of the after-results of 390 cases of tuberculous coxitis, 321 of which were treated conservatively and 69 by resection, comes to the following conclusions: (1) Tuberculous coxitis appears almost altogether in the first two decades of life. The first decade contains one-half of the cases (48 per cent.), the second one-third (37 per cent.), and the third only one-sixteenth (or 6 per cent.). (2) In one-third of the cases of tuberculous coxitis there was no suppuration, while in two-thirds there was suppuration with the formation of abscesses and fistulæ. (3) Fifty-five per cent. of cases treated by conservative methods were cured, the duration of the disease being on the average four years. (4) Forty per cent. of the cases terminated fatally, generally through disease of some other organ, especially of the lungs and meninges, also general miliary tuberculosis, and also from infection of the suppuration in the form of amyloid disease and septic infection. The average duration of the disease was three years. (5) In individual cases the result was influenced by the absence or presence of suppuration; of the non-suppurative form of tuberculous hip-joint disease 77 per cent. recovered; of those with fungous suppuration only 42 per cent. recovered. The appearance of suppuration more than doubled the unfavor-

able prognosis (23:25 per cent. mortality). (6) The time at which the disease began had a marked influence on the prognosis. In general the prognosis grew more grave with increasing years. In the first ten years the percentage of recovery was sixty-five, in the second decade, fifty-six, while in the third and fourth there were only twenty-eight, while in the fifth none recovered. In the fungous-suppurative form there were very few recoveries after the twentieth year. (7) Recovery from the tuberculous coxitis occurred after the metastasis of the disease to other organs. In the first decade 6 per cent. died, in the second 9 per cent., and from the twentieth to the fortieth years 7 per cent. of the recoveries died from pulmonary phthisis.

The remote results are, in general, pleasing, as he found many patients living ten, twenty, and thirty years after operation in apparent good health and often well developed, while none could be called cripple. In most cases the limb was useful and serviceable in work. Movement was, however, in most cases curtailed, in some absent; shortening was not very marked. Though the changes in the acetabulum and luxation of the femur, which he believes is much more frequent than is generally supposed, made the shortening appear very much more in some cases than it really was; while some was due to the effect of osteomyelitis upon the

growing bone. Grouping all forms of shortening together, the author would place about seven centimetres as the average shortening, though many of the patients did not resort to a thickened sole to aid them. The

examination of cases in respect to treatment would lead him to prefer conservative treatment, and he would only resort to resection when conservative treatment did not produce the desired result.

Congenital Syphilis; Infection of the Mother by her Child.

AN apparent exception to Colle's law is reported by Coutts (*Lancet*, June 9, 1894). A child of eight months presented the symptoms of congenital syphilis. Although the father and mother had been married ten years and had five children, none of whom had shown any signs of syphilis. There were no antecedent symptoms of syphilis in the parents. The child was born at term, and presented no symptoms of syphilis until three weeks later, when rhinitis and an erythema of the nates appeared. Vaccination at the tenth week was perfectly normal. At eight months of

age there appeared on the buttocks and thighs ulcers and typical manifestations of congenital syphilis. The rhinitis was marked, and the glands of the neck were enlarged. The liver and spleen were increased in volume. At the end of two weeks the mother, who had continued to suckle the child, noticed two slight ulcerations on the right nipple, and the axillary glands were involved. The throat symptoms made their appearance. The pharynx and tonsils were injected, but not typically. This was followed by mucous patches, a typical eruption with falling of the hair.

Infantile Asthma.

DAUCHEZ (*Maladies de l'Enfance*, June and July, 1894), after an interesting discussion of pathology, classification, prognosis, progress, and treatment of this disease in childhood, deduces the following conclusions:

(1) Infantile asthma is in the majority of cases of reflex origin. It is, therefore, often indicative of a cutaneous excitation of a mucous surface often of visceral disturbance. Taken early cure frequently results. Later it does not yield to treatment.

(2) Symptomatic and reflex asthma is almost always constitutional; yet

there is a true asthma, often hereditary, accompanying a gouty or rheumatic diathesis in a neurotic subject that has a spasmodic tendency. In such cases it is often persistent.

(3) Cures are frequent when there is no gouty or rheumatic diathesis in the parents, if the hygiene is good, and thermal treatment is employed. The more markedly the symptoms appear in a young child, the more easily it can be cured.

(4) It is also a disease of adolescence and of adult life.

(5) It is most frequent in children between 5 and 10 years of age.

Treatment of Tubercular Peritonitis in Children.

DR. MARFAN, after passing in review the medical treatment of this affection, consisting of rest, country air, nourishing diet, administration of the iodo-tannin sirop, given in doses of from two teaspoonfuls to two table-spoonfuls a day; sometimes Dr. Marfan employs cod-liver oil, creosote or its derivatives, or the phosphates or hypophosphites may be given. The author has also employed abdominal revulsion as follows: a layer of the tinctura iodi is applied over the abdomen, and over this, when dry, a layer of elastic collodion. This has for effect the immobilization of the abdominal wall and the underlying organs, thus diminishing, by compression, the hyperæmia of the diseased parts. This application sometimes causes considerable pain. According to the condition of the teguments these applications should be repeated every week or two. As to surgical treatment, the author advises simple

aspiration in all cases where there is abundant ascites. Puncture is especially useful in encysted collections as an explorative measure. As to laparotomy, Dr. Marfan thinks that it is only indicated as follows: in fibrocascations, peritonitis complicated with ascites, in a localized peritonitis with an encysted collection, and in intestinal occlusion taking place during tubercular peritonitis. In the last-named condition, laparotomy must be done at once. The contra-indications for laparotomy are when there are lesions of the lungs and intestine due to Koch's bacillus, especially when they are advanced, and chronic albuminuria.—*La Presse Médicale*, August 18, 1894.

[The sirop iodo-tannique of the French Codex is composed as follows: R Iodine, 2 grammes: Ext. ratanhæ sol., 8 grammes; Aqua et sacch. alb., aa q.s. ut f. syr., 1 kilogramme.]

C. G. C.

Multiple Deviations of Both Legs in a Rhachitic Child; Osteotomy of Five Bones in one Séance.

C. G. CUMSTON, M.D., relates the following case: Child, aged 10. Thorax slightly deformed. Auscultation normal; abdominal organs normal. Head large, squarely built. Teeth presented no signs of rhachitis. Both humeri larger than normal. Cicatrix over left olecranon from operation for cold abscess. Other signs of tuberculosis were present. There was a marked forward curve of both legs; right thigh was conspicuous, the curve tak-

ing up about the entire femur, while the curve in the legs was localized in the lower third of both tibia and fibula; deformity slightly more pronounced on the right than on the left side. Slight genu valgum was present. No pathological condition of the tibio-tarsal or tibio-femoral epiphyses. Child walked with great difficulty on crutches, without which she would only walk a few steps. Operation, November 18, 1890. Osteotomy of

tibia and fibula of both legs in their lower third and osteotomy of right femur. Plaster-of-Paris dressing, which was allowed to remain for forty days, when it was removed, and perfect consolidation had taken place. Massage, electricity, and baths completed the treatment, and the patient

was discharged February 13, 1891, walking without crutches or cane. Dr. Cumston saw the patient one year later, and found that she was going to school, and, in fact, well in every way.—*Medical News*, January 27, 1894.

NOTICE.

By the expiration of the contract between the University of Pennsylvania Press and Dr. E. W. Cushing, the publication of the ANNALS OF GYNÆCOLOGY AND PÆDIATRY by the former Corporation will cease with the present number.

By the terms of the contract all subscriptions paid before the first of October, 1894, belong to the University of Pennsylvania Press, and all paid after that date belong to Dr.

Cushing. All subscribers who are in arrears are requested to settle their accounts with the University of Pennsylvania Press before October 1st. After that date all subscriptions for Volume VIII, and also all arrears of subscriptions should be sent to ANNALS OF GYNÆCOLOGY AND PÆDIATRY, Back Bay P. O., Boston, Mass, and they will be duly received and acknowledged by Dr. Cushing or his authorized agent.

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